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To the London
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MEDICAL REMARKS

ON

NATURAL,

SPONTANEOUS and ARTIFICIAL

EVACUATION.

MEDICAL REMARKS

ON

SCARLET FEVER,

MEASLES AND SMALL POX.

OR

ERUPTION.

BY

JOHN HASTINGS, M. D.

BOSTON:
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1811.

OF LONDON MEDICAL SOCIETY

MEDICAL REMARKS

ON

NATURAL,

SPONTANEOUS and ARTIFICIAL

EVACUATION.

BY

JOHN ANDERSON,

M. D. F. S. A.

THE SECOND EDITION.

LONDON:

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MDCCLXXXVIII.

H1

TO

the WORSHIPFUL the

BAILIFFS,

HIGH-STEWARD,

RECORDER,

AND

The other Members of the Corporation

OF

KINGSTON UPON THAMES,

this HUMBLE IMITATION of

Their exemplary Zeal

to promote the Happineſs of Mankind,

IS,

with *all due Gratitude* for

he indulgent Partiality with which They have ever been pleaſed to honour him,

moſt reſpectfully inſcribed by

Their very much obliged, and

devoted humble Servant,

23 May, 1787. *JOHN ANDERSON.*

PREFACE.

THOUGH Artificial Evacuation be, in many cases, necessary to prevent disease; or, to precede the use of other remedies, for a successful cure; yet a too general and implicit compliance with that practice is highly improper: and it is well known, that some, by cautiously endeavouring to avoid this error, have run into the contrary, which is no less prejudicial. We therefore hope that the observations contained in the following pages, for PREVENTING the ABUSE and IMPROVING the USE of EVACUANTS, and thus promoting the most beneficial purposes of the benevolent part of the FACULTY, may not be thought entirely unworthy of THEIR ATTENTION in particular, and that of the PUBLIC in general; for every thing here advanced is deduced from observation and experience.

Upon

Upon the ſame principle for which the liberal Literati of all ages have commended thoſe who hazard a ſuppoſed claim to the good opinion of the Public ... the principle of being uſeful to ſociety and to themſelves ... the Author of this Eſſay now hazards that reputation, which has hitherto been confined to the ſphere of his practice: and, as health and longevity are bleſſings to which we are permitted to lay a claim, he therefore preſumes to think that this attempt to render the attainment of thoſe bleſſings more certain, and as eaſy as we can, will be favoured with the indulgence of his Readers, and gratify his ambition to be honoured with their eſteem.

Kingſton, 23d May, 1787.

THE Author has now the happineſs to acknowledge, that the expectations of his moſt ſanguine hopes have been exceeded

ceeded by the very uncommon portion he has received of public praiſe; from the Faculty, the Medical and Philoſophical Societies, in particular; and from many of the moſt Learned, Inquiſitive and Reflective among Society at large.

With this encouragement, the Author has reviſed and enlarged this ſtill little work, by the moſt reſpectful attention to every friendly obſervation on the former Edition; and by corroborating the whole with an addition to the evidence of well known practical facts.

As ſome ſuggeſtions have occaſioned doubts about the particular School, or Theory, to which the Author may ſeem to be attached by his obſervations; he begs leave to remark, that, as he received the rudiments of his education in ſome of the moſt eminent Schools in Europe, he hopes he may be ſo far grateful to all, as to acknowledge, he flatters himſelf he has received ſo much inſtruction from each, as to have no particular diſ-

like

like to the theories of either; nor a ſlaviſh adherence to the dogmas of any theories whatever. Reaſon has directed that practice which the Experience here alluded to has ſucceſsfully confirmed*.—On the whole, he may juſtly ſay, as Candour, he hopes, will now admit, he has been guided by that immortal ornament of the human ſpecies, that univerſal genius, VERULAM; who, in his beautiful Eſſay on Study, gives this moſt excellent advice: "Read "not to contradict and confute; nor "to believe and take for granted; nor "to find talk and diſcourſe; but—to "weigh and conſider."

Margate, 23d April, 1788.

* Verum eſt ad ipſam curandi rationem nihil plus conferre quam experientiam. CELSUS.

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MEDICAL REMARKS.

CHAP. I.

On Evacuation in general.

THE indication to evacuation of any kind, implies a neceſſity of removing ſomething that exiſts in the habit, which, by its quantity or quality, is, or may become, prejudicial to health. It is not, however, the mere evacuation, but the action of the ſpecific ſtimulus on the excretory organs which promotes it, that gives partial or univerſal ſympathy, encreaſes ſecretion, excretion and abſorption, and thereby reſtores the oſcillatory motion of the fibrous ſyſtem.

Medicines, whether applied externally or internally, act primarily by organical motion; and then on the fluids in a ratio proportionate to the texture and velocity of the blood, the temper of the ſolids, and the natural inherent power of the medicine in its peculiar ſphere of action.

It is difficult to explain the modus operandi, and ſpecific action of a medicine or natural ſubſtance, on moveable matter, without having recourſe to the various but uniform laws of attraction and repulſion; from which is derived coheſion, expanſion, nutrition, digeſtion, ſecretion, excretion, fermentation, rarifaction, and ſolution of animal, vegetable, and mineral bodies, and all chemical operations whatever, ſo far as their effects and motion extend.

For exciting evacuations, the learned and attentive Proficient will not only adapt the kind of ſtimulus, and quantity of the evacuation, to the ſex, age, temperament and conſtitution of his patient, but alſo to the ſeaſon of the climate in which he preſcribes. I have ſeen ten grains of ipecacuanha operate as forcibly in ſummer on a patient at Gibraltar in the latitude thirty-ſix degrees, as thirty did on the ſame habit in winter at Edinburgh in the latitude fifty-ſeven degrees *.

* "Differunt pro natura locorum, genera medicinæ; & aliud opus eſſe Romæ, aliud in Egypto, aliud in Gallia." Celſus.

The

The mode of living has alſo its particular effects. The ſeafaring man, who is accuſtomed to live on ſaline, hard, and flatulent food, is not eaſily moved: and the ruſtic may live on milk, till the inteſtines can ſcarcely feel the effect of any ſtimulant*.

The remarkable peculiarities of different conſtitutions, the accidents of life and their effects, are likewiſe ſo many and ſo various as totally to preclude a poſſibility of reducing them to any eſtabliſhed rule: and it is ſo obvious to every one, that it ſeems almoſt ſuperfluous to obſerve on, the neceſſity of being well acquainted with the particular virtues, and different effects, of the ſame medicine in its various preparations.—Aſarum, an emetic in its primary influence on the ſtomach, becomes a diuretic when taken in a weak decoction; ipecacuanha, by

* "Les montagnards qui ne vivent preſque que de lait, ont des fibres ſi peu ſenſibles, qu'il faut pour les purger, des doſes qui tueroient tous les payſans de la plaine. Il y a dans les montagnes du Valais, des hommes qui prennent tout à la fois juſqu'a vingt, & même vingt quatre grains de verre d'antimoine, dont un grain ou deux ſuffiroient pour empoiſonner des perſonnes ordinaires." Tiſſot, Avis au Peuple. Des Purgations, ſect. 551, p. 519.

ſtrong decoction, loſes its emetic, but retains its diuretic quality: nicotiana, by boiling, loſes much of its acrimonious emetic quality; and therefore it is, that, in the ſyrup, we have a ſafe purgative, diuretic and pectoral medicine. Its narcotic quality is retained. Jalap, by coction, loſes much of its virulent inflaming acrimony, but retains its purgative quality. Between the raw and roaſted, or boiled onion, there is alſo much difference: in its raw ſtate it is hot, acrimonious, ſtimulating and expectorant; but, when boiled or roaſted, it is remarkably mild, cooling, nutritious, demulcent, aperient, diuretic and ſomniferous. Sena, on the contrary, by boiling, becomes draſtic: the infuſion is much milder. By diſtillation, flammula, crow-foot, ſmallage, are deprived of their veſicatory property: citron loſes its acidity; water-pepper, its acrimony; and that bitter plant, wormwood, becomes ſweet. Antimonial wine, when taken in ſufficient quantity, vomits, and that powerfully: diaphoretic antimony only ſweats, and that but gently; and yet both are inſipid to the taſte. In the ſelection of drugs, we muſt not only attend to the apparent diſcrimination

tion of their native excellence, but to the place where they grew and the time they have been gathered. To obtain the intended benefit of theſe, we muſt attend to the operations of nature, and carefully avoid an abrupt obtruſion when ſhe means to be her own phyſician; leſt, inſtead of aſſiſting, we drive her into confuſion, perplexity and embarraſſment. We, however, muſt be equally cautious of not depending on her for too much; for, in the catalogue of human miſeries, there are ſome diſeaſes that will not bear to be trifled with, or for a moment neglected; pleuriſy, phtyſis, lues-venerea, ſcrofula, leproſy, ſcurvy, cancer, yaws, could never be cured by the mere efforts of nature, which the ſtroke of an apoplexy would inſtantly ſubdue, if theſe efforts of nature were not inſtantly aſſiſted by the efforts of art. It therefore is obvious, that great efforts of judgment are frequently wanted to ſelect and apply ſuch aſſiſtance as hath been given us for the preſervation of health; and more eſpecially ſo in determining the proper evacuations, on which that event of ſucceſsful practice ſo exceedingly much depends. But, in determining

on thoſe proper evacuations, it is to be cautiouſly obſerved, that the natural powers of action muſt never be brought ſo low as not to be capable of ſome reſiſtance to the approaches of diſeaſe.

It has often been queſtioned, whether medicines are poſſeſſed of ſpecific elective attraction. Though we cannot affirm, from demonſtrative proof, that they ſelect or act on the morbific particles only, yet we obſerve that all ſimples have a power of acting, more or leſs, upon this or that organ, and of accelerating the motion of the fluids through their emiſſary veſſels; and of inviting an influx of other fluids from remote parts to be diſcharged along with them. Thus, rhubarb, cellery, aſparagus, onions, nutmeg, mace, turpentine, cantharides, act, as it were, ſpecifically and uniformly on the renal organs; ipecacuanha on the ſtomach; jalap on the inteſtines; mercury on the ſalival; and antimony on the miliary glands; as if there were ſpecific alliances between certain medicinal ſubſtances and ſecreting organs, which never deviate, unleſs, when, by accident or management, they are made to exert their force indirectly by other ſecretions.

tions. For this reaſon it is, that medicines have not been arranged according to their ſenſible or ſecondary qualities, but according to their operative powers. All bitters, for example, do not act alike; ſome being emetic, ſome cathartic, and ſome ſtomachic. Diſeaſes have but little to do with ſenſible qualities. Though each ſimple poſſeſſes a power peculiarly inherent in itſelf, yet that is not to be explained upon mechanical or numerical principles.

Artificial evacuations, if not very ſoon ſucceſsful, become prejudicial. Cathartics, and indeed all other medicines, have moſt effect on their firſt exhibition; but, by becoming familiar, the habit will require a gradual increaſe of the doſe to maintain, as at firſt, their effect; or, ſometimes, to refrain from taking them at all; which is almoſt equal to a change of the medicine, or an increaſe of the doſe: from whence it is evident, that no medicine ſhould be too frequently uſed, even in the ſmalleſt doſe, leſt it ſhould pall the ſtomach, vitiate the nutrimental juices, defile the blood, induce debility, and increaſe the diſeaſe, it, by this means, perhaps, is deprived of power to cure. There

is

is nothing worthy the name of medicine that is not capable of doing harm, and which alſo often does, when raſhly and indiſcriminately uſed upon emperical, rather than upon rational dogmatical principles.

CHAP. II.

On Evacuation by the Stomach.

THE preternatural motion of vomiting may be variouſly excited.

Firſt, *ſymptomatically*; when, on receiving contagious infection, the ſtomach is early affected by nauſea, and even vomiting.

In petechial, or purple ſpotted fevers, immediately before the eruption, this nauſeating ſymptom is common; but it ceaſes when the puſtules appear, though it returns when they recede.

Immediately before the paroxyſm of remitting, intermitting and putrid malignant fevers, ſpaſms in the primæ viæ are accompanied by vomiting of bilious ſordes. But, as this is an effort of nature to throw off the noxious particles, it ought to be aſſiſted.

On

On an approaching fit of the gout, patients, in general, naufeate and loath their food; fome are fo ſick as to vomit, eſpecially in a morning before breakfaſt.

The black bile diſcharged from the ſtomach, as in the morbus niger of Hippocrates, is an evident ſymptom of the depraved ſtate of the blood and bile.

The puking of infants is, for the moſt part, occaſioned by ſweetmeats, by aceſſent food, or by a repletion of the milk on the ſtomach becoming acid and offenſive; when nature, by this ſimple effort, gets rid of the noxious aliment, which, if diſtributed thro' the circulating fluids, would pervert her operations and prejudice the conſtitution. This effort is beſt aſſiſted by ſmall quantities of ipecacuanha wine; for that ſtrengthens the ſtomach and inteſtines, which might loſe their proper tone if the puking continued; and dangerous ſymptoms, ſuch as nervous ſpaſms or convulſions, diarrhœa, or hectic, would enſue.

If the ſtomach be ſurcharged with indigeſtible matter, the proceſs of digeſtion is rendered ſlow, laborious and painful; and the chyle produced is crude, and unfit for aſſimilating

aſſimilating with the blood. The moſt innocent meal, if permitted to lie long on the ſtomach, turns to acid, acrid, or bitter recrement, which occaſions nauſea and offenſive eructations, and a troubleſome ſenſe of fulneſs indicating the neceſſity of a gentle emetic.

When adults vomit ſpontaneouſly, it is neceſſary to explore and find out the primary inciting cauſe before any attempt is made to repreſs or encourage it. For inſtance, if in the irritable nervous hyſteric patient, it is ſuddenly repreſſed by opium or aſtringents, anxiety, oppreſſion, convulſions of the limbs, will come on, and the ſickneſs return with greater violence.

If the emotion ſhould happen to be occaſioned by a diſcharge of the catamenia from the mouth, to ſtop it haſtily would pervert nature, and check her ſalutary deſign; perhaps throw it on the brain; and, as I have ſeveral times ſeen, produce mania. But in hœmoptyſis, or caſting up of blood, attended with inflammation or fever, the ſtimulus of an emetic would only enrage the ſymptoms, which refrigerants and cooling reſtringents might diminiſh.

On

On the proper tone, contractile power and warmth of the ſtomach, depend the harmony and energy of the ſyſtem: atony, weakneſs and frigidity, produce its diſcord. As the ſtomach is the primary ſeat and center of many of the motions in remote parts of the ſyſtem, it conſequently ſhould be the firſt part attended to. The matter ejected from it determines the practice; and may alſo, in a great meaſure, predict the event.

2. *Sympathetically.* A remarkable ſympathy is maintained between the ſtomach and brain. If the ſtomach is ſurcharged, the head is diſordered alſo; and, if the brain be injured, nauſea and vomiting immediately ſucceed. There is alſo a great ſympathy between the brain and the heart: the energy of the one depends upon the propelling force of the other.

Sympathetic vomiting in the firſt months of conception, is occaſioned by a regurgitation of the blood to the ſuperior parts from the retained menſes. Venæſection, reſt and tranquillity ſubdue it; it however, may be neceſſary to add the aſſiſtance of ſome ſpoonfuls of barley-cinnamon-water, ſpearmint tea, or ſaline julep, with ſome extract.

cicutæ.

cicutæ. Cold ſpring-water is the beſt drink. For the ſame reaſon, ſimilar naufeating ſymptoms afflict thoſe who have no menſtrual diſcharge; and that particularly after eating or drinking.

Sympathetic vomiting is alſo occaſioned by ſtone in the pelvis of the kidneys, or in the gall-bladder, which is quieted by ſedatives and antiſpaſmodics. Though the action of an emetic ſometimes impels forward biliary ſtones and gravelly matter into the inteſtinum duodenum; and, ſometimes, from the pelvis of the kidneys, into the veſica urinaria; yet, if it propels them no farther than the biliary ducts or the ureters, a jaundice will proceed from the one, and ſuppreſſion of urine from the other. Cholic, iliac paſſion, and ſpaſms in the viſcera, will alſo occaſion a ſympathetic vomiting.

Sudden ſurpriſes, or violent emotions, whether by joy or grief, have great effect upon the ſtomach, digeſtions, excretory organs, and nervous ſyſtem; as is evident by the naufea, deliquium animi, cold partial ſweats, tremor, debility, that ſo frequently affects the delicate, feeble, irritable habit.

The

The vertiginous motion of ſea-ſickneſs occaſions nauſea and vomiting; on which occaſions the remarkable diſcharge of bile from the mouth, demonſtrates how greatly the biliary organs are operated upon, and thereby points out the efficacy of the ſtimulating emetic in biliary obſtructions from crude viſcid bile.

3. *Antipathetically.* The antipathy, or averſion, that ſome perſons have inherently to certain things, is ſo great as to make them ſwoon, vomit or purge, at the ſight or even ſmell of the thing that is abhorred. Whatever is diſguſtful to the ſight, offenſive to the ſmell, or nauſeous to the taſte, raiſes abhorrence, and excites vomiting.

4. *Critically.* If vomiting be critical, it becomes a cure of the reigning diſorder, by anticipating it in the beginning, or by ſeparating the noxious parts from the purer juices in the advanced ſtage. An imperfect criſis leaves ſo much of the morbid principle in the habit, as is with great difficulty, if ever, overcome.

5. *Artificially.* The artificial emetic is an excellent imitation of the critical ſpontaneous vomit; and often produces the moſt

important effects. The emetic not only cleanſes the ſtomach of crude indigeſtible matter, but ſympathetically influences the remoteſt parts of the ſyſtem to a diſcharge of their contents, and thereby purifies the body of morbid or noxious particles. Nothing, therefore, is ſo effectual as the emetic for relieving a cough, or difficult reſpiration; for it opens obſtructed ſecretions, promotes expectoration, encreaſes tranſpiration, and takes off the oppletion, or fulneſs, from the veſicles of the lungs, head, faucial, and miliary glands; and thereby admits of a free and regular circulation through the extreme capillary veſſels.

Ipecacuanha and antimony are the firſt of the vegetable and mineral emetics. Ipecacuanha, as being a ſafe and certain one, is in moſt general uſe; but antimony, for certain indications, is much more effectual: ſuch as in the ſtubborn chronic diſeaſe, that requires the very active, diffuſive and laſting medicine. Sal vitrioli is a more efficacious emetic than ipecacuanha in dyſentery, though deemed its ſpecific. Squill emetics are better adapted for pectoral ſtuffings. Either muſtard or horſe-radiſh are a good emetic for gout in the ſtomach;

ſtomach; for while they evacuate they invigorate and warm the frigid ſtomach; and prevent languor by only operating for a moment. Whole white-muſtard ſeed being aperient, diuretic and diaphoretic, is excellent for keeping the gouty habit equal and ſoluble.

With reſpect to the power and efficacy of emetics; in the nervous irritable habit, the very active ſtimulant increaſes the irritability, by accelerating the motion of the fluids, until atony in the vaſcular ſyſtem is induced: the leſſer ſtimulant, on the contrary, invigorates and, like moderate exerciſe, gives ſtrength and elaſticity to the ſolid fibre, which by too much exertion is debilitated. The full emetic operates briſkly, unleſs the patient's ſtomach be too haſtily drenched with water, which weakens the fibres of the ſtomach, and has been known to deſtroy its contractile power.

The very gentle emetic is apt to paſs off by the inteſtines; but even then it is beneficial, eſpecially in fevers, by taking off the reſtriction of the excretories. The dry emetic, that merely cauſes nauſea, or little more, is very ſerviceable when exhibited

on the acceſſion of fever, and in atony of the ſtomach. An emetic in the beginning of a contagious malignant diſeaſe, often prevents its increaſe; but if it ſhould not have that effect, it nevertheleſs fits and prepares the ſtomach for the reception of thoſe remedies which are moſt likely to produce that ſalutary end. It leſſens the cold and haſtens the hot fit of agues; and brings the paroxyſms to regular periods, for adminiſtering with ſafety, and good effect, its highly extolled ſpecific, the Peruvian bark. Indeed, without emetics, agues are neither ſafe, ſoon, nor completely cured by any tonic. It is one thing to remove a paroxyſm of an ague, ſtone, cholic or gout; but another to cure the diſeaſe.

However uſeful and neceſſary emetics are in various caſes, circumſtances and ſituations; yet, if very frequently employed, they, by becoming habitual to the ſtomach, will require ſuch repetitions, as muſt debilitate that organ, and thereby render it unable to perform its functions. The emetic that operates too violently, may be counteracted by acids, and its force thereby diverted from the ſtomach to the inteſtines.

Many

Many are the circumſtances that indicate and contra-indicate the emetic. For theſe I refer to the reſpectable therapeutic writers, and more eſpecially to the ingenious Doctor Andrew Duncan's accurate performance on the elements of that branch.

CHAP. III.

On Evacuations by the Inteſtines.

PRETERNATURAL alvine diſcharges may be produced by various cauſes. Thoſe diſcharges which are promoted by purgatives in imitation of the ſpontaneous ſolution of the febrile diſeaſes by ſtool*, are very conſiderable: for the ſtimulus of the medicine, not only by promoting the periſtaltic motion, ſends forth the accumulated fœcal contents, but extends its influence to the remote parts of the body, and derives an afflux of fluids from the different ſecreting organs by the many excretories that termi-

* Una alvi ſpontanea ſolutio atque perturbatio continuam fibrem tutò ac perfectè judicat.

FERNELIUS.

nate in the various circumvolutions of the inteſtinal canal, the receptacle and drain for their purification. But, though it muſt be allowed that purgatives are very important and often neceſſary medicines; yet it alſo muſt be admitted, that the pernicious effects, which ariſe in conſequence of their abuſe, are ſeldom attended to.

Purgative evacuants are two-fold; lenient and draſtic. They both act, more or leſs, univerſally on the ſyſtem, as well as particularly on the ſtomach and bowels. That ſome of the finer particles of medicines are taken into the habit, and mix with the blood, where they act a new part, is manifeſt from the ſubſequent ſymptoms, and phenomena of the fluid excretions.

Manna is conſidered as the moſt mild and ſafe purge: few, however, know what it is. Donatus Antonius Ab Altomari, more than two hundred and twenty years ago, ſaid it was a concreted ſaccharine exudation of a ſpecies of aſh in Calabria; and not, as then imagined, a honey-dew hardened by the heat of the ſun. A French writer of conſiderable note, deſcribes it thus, "Pour la manne elle n'eſt fort ſuſpecte en cette rencontre

contre (in dolore capiti ſatroci) & preſque toujours; car nous en avons, qu'on nous apporte d'Italie, n'eſt autre choſe que du ſucre, & du miel mêlés enſemble avec un peu de ſcammonée." And, of the ſecond ſort, which we have imported from Marſeilles, and made at Briançon, a town in the Upper Dauphiny, he ſays, " Dans la manne de Briançon il y a du ſuc de tithymale & d'eſpurge."

The ruffling reſinous ſcammoniate and aloetic liquating purges, very frequently repeated, debilitate the ſtomach and inteſtines, excite ſpaſms, ſtimulate the arterial and nervous ſyſtems, and thereby increaſe the progreſſive motion of the blood, even to the febrile inflammatory degree, and determine it in unuſual proportion from the ſuperior parts, by the meſeraic veſſels, which are relaxed and their orifices expanded; the glandular juices likewiſe, by their emiſſaries, flow into the cavity of the inteſtines and renal paſſages, where there is a depletion of the inferior veſſels and a diminution of their reſiſtance. To theſe ſucceed languor and debility, the ſmall, ſharp and hoarſe voice, ghaſtly countenance, dejected mind, diſturbed

turbed ſleep, convulſive motions and ſtricture of the præcordia; which again run into dyſentery, or dropſy, hypochondria, or palſy; and, by the nutritious parts of the aliment being prevented entering the lacteal abſorbents, a maraſmus, or extreme waſting, with all the tribe of hectic ſymptoms, enſue. The veſſels collapſe, and their juices corrupt. On diſſection the membranes of the ſtomach and ſmall inteſtines are found abraded, inflamed, and marked with red and variegated ſpots; ſo that ſevere purgation is almoſt equal in its pernicious conſequence to the corroſive effects of real poiſon. Eraſiſtratus was of opinion, that ſcammony changes the blood into bile; the flowers of braſs, into water; and grana cnidia, and carthamus, into phlegm.

Though milk, oil, fat, calf's-foot jelly, broth, mucilages, obtund acrimonious particles in general, yet the deleterious force of certain bodies are counteracted more directly by their own peculiar correctorium: thus, mercury is corrected by ſulphur; ſulphur, by nitre: jalap, by cream of tartar; coloquintida, by ol. tartar. perdeliquium; ſcammony, and all other reſinous bodies, by

ſalt

ſalt of tartar; aconitum, and the other narcotic plants, by the ſtinging nettle. Corroſive ſublimate diſſolves in water, and its force is thereby overcome. Arſenic will not diſſolve in water, but does in oil. Water does not ſubdue the acrimony of ſulphurous or metalic bodies; but water and vinegar thrown into the ſtomach has blunted the point of a needle ſo much as to prevent its doing any material injury.

The draſtic purge is moſt commonly uſed in obſtinate conſtipation, where there is inactivity of the muſcular fibres of the inteſtines, and the juices are ſlow in advancing to lubricate, diſengage and ſtimulate to a protruſion, the pent up indurated fœces; but that being once obtained, the ſtimulating forcer is then to be relinquiſhed, leſt, by a hypercatharſis, or exceſſive purgation, the natural craſis of the blood be broken down, the alimentary fluid defrauded, perſpiration leſſened, and vital heat extinguiſhed.

Obſtinate conſtipation demands the moſt ſeduious attention; as, by the irritation and increaſed debilitating action of the indurated fœces retained in the inteſtines, many alarming ſymptoms are brought on: ſuch as heat, thirſt, cough, head-ach, indigeſtion, flatulency,

lency, fœtor of the breath, hiccup, habitual conſtipation, or loſt tone of the inteſtines, iliac paſſion, *mortification.*

In ſome fevers it is better to be coſtive than lax. Diemerbroek, when ſpeaking of the plague, in his Prognoſtics, ſays, "If the patient was coſtive and ſo continued till the declenſion of the diſeaſe, it was a good ſign, and afforded hopes of his recovery: but a diarrhœa was a dangerous ſymptom, and uſually terminated in death."

Whatever be the occaſional cauſe of the conſtriction of the excretory ducts that open into the inteſtines, or that retards the juices from coming forward, or the periſtaltic motion from ſtimulating them to action, the proximate or immediate cauſe muſt be attended to; which is affected, in the firſt inſtance, by medicine; and, in the ſecond, by diet, regimen and exerciſe.

In obſtinate conſtipation, I have ſometimes ſucceeded by the lenient when the draſtic had been rejected by the debile ſtomach, and even when it remained there. This, I apprehend, was occaſioned by the ſtomach and inteſtines being brought into a ſtate of tenſion by the ſtimulus of the draſtic, which prevented excretion; but the lenient, by operating

operating more kindly, prevented that reſiſtance, and therefore was effectual. The purging medicine, however, whether lenient or draſtic, does not act at all times alike on the ſame perſon: when it meets with ſharp humours, or is untimely adminiſtered, as during the courſe of ſome critical or periodical diſcharge, it will, at ſuch time, act with great violence. When the cathartic is unembarraſſed with foreign or crude matter, it acts more pleaſantly: wherefore it is that a purge operates beſt upon an empty ſtomach, and paſſes on to the inteſtines; whereas, the emetic operates with moſt certainty when the ſtomach is full. If the inteſtines are emptied by a clyſter in the evening, the purge taken next morning will be quick in its operation.

As cathartics determine the fluids from the ſurface to the inteſtines, they cannot have any farther effect in the cure of a fever, than as they are prophylactic, and thereby carry off the recrementitious matter that is become a fomes morbi; but this muſt be done early, or immediately after the diſeaſe has paſſed its acmè or height. Such accumulated matter ſhould alſo be carried off immediately after

after a paroxyſm; for a ſeparation hath then taken place in the ſecreted fluids, though the criſis be but an imperfect one.

The draſtic purge, for a moment, may delay the gouty paroxyſm; but, by thus weakening the ſtomach and bowels, and diminiſhing native heat, the diſeaſe will gain ſtrength to return with redoubled force and new acquired ſymptoms: this medicine ſhould therefore be conſidered as an occaſional cauſe that gives force to the principles of that diſeaſe.

But, though draſtic phyſick be objectionable, as improper in this diſeaſe, yet lenient and cardiac is often neceſſary and proper; for it helps to leſſen the force of the fits and lengthen the intervals. When nature is performing the work of depuration, as in the paroxyſm of fever, gout, or feminine monthly purgations, or other ſpontaneous or critical diſcharges, ſhe is not to be diſturbed, it being better to wait an indication than force one unſeaſonably. However, a patient, under either of theſe circumſtances, muſt not be ſuffered to endure a preternatural retention of fœces, which may be removed by a lenient purge. The ſtomach and

and inteſtines muſt be evacuated before an attempt be made to expel the gout from a viſceral part to the extremities. An occaſional diſcharge of thin bilious ſtools obviates a paroxyſm. Turbid, thick urine, of a pale red colour, does the ſame, and rather more, for it ſhews the paroxyſm is over. To ſtop this or, indeed, any other flux prematurely by ſtyptics; that is, before the inciting particles are obtunded, deſtroyed, and evacuated, is dangerous; and by obſtinately attempting to carry it off too haſtily by purgatives, there is a danger of heightening the irritation, and debilitating the tone of the inteſtines. Rhubarb and myrobalans will do it the leaſt, becauſe they bind as well as looſen.

A Lady of Kingſton, upwards of 50, of a bilious complexion, who had been affected with the gout from her cradle, and, by a want of ſufficient ſtrength to throw it out in regular fits on the extremities, was frequently attacked with imperfect ones. She had frequent bilious motions which always leſſened the force of the fits. Sometimes ſhe was conſtipated, during which ſhe would complain of great uneaſineſs and impatient anxiety. When I was firſt called in to this lady's aſſiſt-

ance, ſhe was exceedingly ill indeed, and conſtipated; but her ſagacious Apothecary, who had attended her for many years, made me thoroughly well acquainted with her conſtitution, at once, by ſaying, that three grains of rhubarb, when the fits were off, were ſufficient to procure her ſeveral motions. Cautioned by this fact, I was inſtantly enabled to proceed with ſucceſs; and, by a little occaſional help, ſhe lived ten years after. This caſe I give to ſhow how cautious we ought to be in preſcribing for ſuch delicate conſtitutions. An emollient and aperient clyſter, repeated twice or thrice, gave effectual relief. When this diſeaſe attacks the head, or other noble part, it is neceſſary to make a revulſion to the extremities by bliſters, clyſters, pediluvia, lenient purges, &c. but the haſty application of external repellents, has not unfrequently proved fatal, by throwing the morbific matter on the brain.

Gentle purging, with rhubarb and magneſia, is almoſt always neceſſary for the cure of a diarrhœa. Opium is of no uſe in this complaint, as the ſtools diſcharged are equ y liquid, not fewer but more fœtid.

Both purging and vomiting are indiſpenſible

fible for the cure of an ague before its great antidote the peruvian bark is adminiſtered. The primæ viæ muſt be cleanſed, or the bracing power of the tonic, by giving too great force and reſiſtance to the organical fibres for excretion, will increaſe the inflammatory diatheſis in the blood, and thereby raiſe more grievous ſymptoms than it was at firſt deſigned to ſubdue. Thus opiate reſtringents are pernicious, in a looſeneſs, when thrown in prematurely before the ſtimulating cauſe is carried off. One large doſe of laudanum that was given to a child, of a year old, for a cough, accompanied with a diarrhœa, ſtopped reſpiration, checked expectoration, and diminiſhed the power of the cheſt, ſo as to prevent the effect of the ſtrongeſt emetics, and conſequently to be fatal. Such inſtances point out the neceſſity of tending to the natural powers, operations and effects of medicinal ſubſtances, for alleviating vitiated conditions and unnatural motions in animal bodies.

Purging is alſo neceſſary to carry off worms. We however ſhould conſider, that, though their place of reſidence be local, their influence is univerſal: as evidently appears by

the nervous ſymptoms and remitting fever which they occaſion. But, though theſe ſymptoms ariſe from worms and congeſtion of foul ſabburra in the firſt paſſages, which ſeem to indicate purging, yet draſtic phyſick is very improper, becauſe the worms which live on the natural juices that ſhould have nouriſhed the body, having thereby left the inteſtines abraded and defenceleſs; the ſtimulus given by draſtic phyſick would add to the injury already done to the nervous power.

A few years ago, a young Gentleman about ten, of delicate make, was ſeized with a fever in London, and was ſo far carried through it by an eminent Phyſician, as to be thought able to bear removal to his father's ſeat at Wickham in Kent, where his fever increaſed, and I found it to be remittent. During the exacerbation, he talked incoherently, and his belly ſwelled immenſely, but ſubſided again on the paroxyſm going off. In the remiſſions, his ſenſes were clear, and his appetite keen. He ſlept with his eyes open, and frequently would ſcratch his noſe, and grind his teeth. The ſymptoms convinced me his diſorder was occaſioned by worms. I therefore

fore added vermifuges to his febrifuges in my prescription. But the parents, who were of the medical-wife tribe, on hearing my opinion, chose to neglect my prescription, and gave him a favourite purging medicine of their own, though they did not know what it was, which he took three or four times at short intervals. This purged him drastically. The stools were variegated, slimy and fœtid, with many small live and dead ascarides worms: which was so far well; but it unfortunately went farther: he was before so much reduced by the fever, that strong physick was improper: it weakened him more, particularly his optic nerves so much that he went blind. I was now sent for in all haste, and immediately put him on a strengthening course of peruvian and eleutherian bark, virginian snake-root, wild valerian, &c. and gradually brought him from the gentle tepid to bear the cold bath; by which, and light nutritive diet, in a few weeks his eyesight was perfectly restored, and he has enjoyed a fine state of health ever since.

Though lenient physic obviates and relieves in a venereal gonorrhœa, yet superpurgation is still more detrimental to the

conſtitution than even the malignity of the virus itſelf. By it, and the diſeaſe, youth are rapidly incumbered with the infirmities of age, and prematurely ſurrendered to the oblivion of a grave, unleſs the diſeaſe of the parent ſhould be entailed on a progeny that may be a peſt from their birth, and as loathſome to ſociety as miſerable to themſelves.

Acrid phyſic not only inflames the inteſtinum rectum, but extends its inflammatory ſtimulus to the urethra, and is improper in every ſtage of the complaint.

The faculty have much difficulty in ſatisfying venereal patients, who have been long on a courſe of purging medicines. Their perceptions are ſo much quickened by nervous irritation, as to impoſe on their deluded imaginations, and afflict them with all the horrors and torments of ſuppoſed real ſymptoms, which are merely ideal, or, at moſt, but ſymptoms of debility. Such impatience, however, I believe, in general, is exceedingly reprehenſible; for I have never, in the courſe of my practice, ſeen the blood ſo corrupted, the ſecretions ſo vitiated, the nocturnal pains ſo vehement, the ulcers ſo malign, or the bones ſo foul, by this diſorder,

order, as not to be curable by the flow but sure alterative, such as the pills and decoction I have particularized below.*

The judicious and truly wise will always seek the permanent, though flow acting cure†.

Nothing hath yet been discovered to equal mercury for lues venerea; but the best things may be abused. The ptyalism raised by mercury, is a discharge, it is true, of morbid serosity from the blood, in imitation of the spontaneous and critical discharge by the salivary glands in some putrescent dis-

* ℞ sulphur. antimon. præcipitat. ℈ij.
Calomel. ppt. ℈i. Terantur simul diu in mortorio vitreo. Postea add.
Resin. Guajac. pulverizat. ʒi.
Camphor. ℈ij.
Extract. cicutæ.
——— Hyoscìami a a ʒss.
Balsam. Canadens. vel copaib. q. s. f. massa. E singulis scrupulis pilul. No. vi. formand. quarum ij. iij. iv. vel vi. nocte maneque, super bibendo haustum (unc. sex saltem) decoct. lignorum secundum pharmacop. Edinburgensis, vel decoct. rad. sarsaparill. bardan. glycyrrhiz. vel ex lign. juniper.

† Sed fere periculosa esse nimium & festinatio & voluptas curet. CELSUS.

eases,

eaſes, ſuch as ſmall-pox; yet my experience does not enable me to ſpeak very highly in favour of this artificial drain. In ſhort, the effects I have ſeen in conſequence of it, forbid my ever ſalivating another patient. I can, indeed, ſpeak boldly of the utility of mercury, not only in this, but in other inveterate complaints, when given in ſmall doſes, and at ſuch proper diſtances of time, as not to ſalivate, but as an univerſal deobſtruent and aperient. I have, often, for inſtance, cured dropſy in the incipient ſtage, by a courſe of one-grain doſes of calomel to four of camphor, and two of extract. hyoſciami. I ordered a doſe every night; and, after every fifth or ſixth night, a gentle doſe of phyſic; ſuch as ſix or ſeven grains of pulv. jalap. with ten of cremor. tartar. During this courſe I alſo ordered a decoction of dandelion-root, or juniper-berry tea; and, ſome days, a cupful of white horehound tea.

Attention was paid to the non-naturals. I never confined my thirſty hydropic patient wholly to dry food, as has been recommended by ſome: it is cruel, and only haſtens the putrid proceſs. As vegetable acids

acids are anteputrefcent, and, by their ſtimulus in the mouth, increaſe the ſecretion of ſaliva, allay thirſt, ſharpen the appetite and promote a flow of urine; I never forbid their uſe in moderation. The foſſil acid, vegetable acerb, and aſtringent, leſſen nervous ſenſation. They are, however, uſeful for certain indications. I have cured dyſentery by the acid of vitriol after ſundry other things had failed; and, in warm climates, by the acid of lemon, in barley-water and olive-oil, I have checked putridity, ſuppreſſed exalted bile, and thereby cured diarrhœa, cholera morbus, &c. In dropſy, where there is obſtruction, defect of abſorption, ſecretion and excretion, tepid relaxing liquids in great quantities muſt be hurtful. Where it is otherwiſe, the redundant quantity quickly paſſes off and leaves the viſcid fluids leſs tenacious.

By the above-mentioned mode, the mercury pervaded the whole body, and fuſed and increaſed the impetus of the fluids, and capacity of the ſecretory orifices; that is, it was deobſtruent, while the camphor excited genial warmth in the blood, and the extract aſſiſted not only to make the operation

tion of the mercury eaſy, but to correct the vitiated fluids, and promote evacuation through the cuticular and renal emunctories.

Thus alterants are not wholly diſtinct from evacuants; indeed, I know no diſeaſe that is perfectly cured without evacuation by ſome outlet or other.

It is difficult to maturate or reſolve the ſchirrus venereal bubo, which is in want of heat and vibration to liquify and reſiſt the inſpiſſation, and ſpur on the ſtagnating lymph in the cells of the glands. Indeed, cold indurated tumefactions of any kind are tedious, and are never ſafely nor completely reſolved without univerſals, which deſtroy the cementing principle, and diſcharge inſenſibly as well as ſenſibly the noxious particles. I have ſometimes been ſo fortunate as to ſucceed in theſe caſes by the alterative pills and decoction particulariſed in page 31.

The warm mineral ſprings and tepid ſea-water bathing do much towards reſolving and diſperſing the ſtony ſchirrus, before it degenerates into the painful corroſive cancer.—Mineral waters are ſo exquiſitely well mixed by the chemical proceſs of nature,

ture, as to be highly deobſtruent; and, by accelerating the languid circulation, they are exceedingly efficacious in conquering the obſtinate chronic diſeaſe; eſpecially if drank at the ſpring before its volatility and native heat are extinguiſhed, when the concrete matter will ſubſide.

Strong purging has been recommended, by ſome eminent men, for dropſies; but for what reaſon is not ſufficiently evident to me, as the cacochymic and leucophlegmatic habit is brought on by nothing ſo ſoon as by it. It is true, that much water is thereby carried off; but the ſolids are left in a more debilitated ſtate, and, conſequently, the water, by meeting with but ſmall reſiſtance, and ſweat and urine being diminiſhed, again accumulates faſter. I have had many dropſical patients in all its ſtages; but, though I will not pretend to ſay I have been ſo fortunate as to cure them all, nor the one half, yet experience authoriſes me to aſſert, I have ſucceeded with a conſiderable number by the lenient method—with none by the draſtic*. The lenient phyſic operating

* Hydrapicis alvum moliri cibo melius eſt quam medicamento. CELSUS.

kindly,

kindly, it expanded the excretory orifices, and allowed the obſtructed fluids to paſs off gradually without occaſioning languor, inertia, debility, or deliquium animi, which generally attends draſtic purgation, or the operation of the paracenteſis.

If dropſies proceed from ſuch a laxity of the fibres, as to be deprived of power to impel forward the influent fluids, ſurely it becomes neceſſary to reſtore the vaſcular ſyſtem to its natural elaſtic ſtate, by roborants, ſtimulants, exerciſe, nutrients, and, occaſionally, gentle aperients, rather than weaken it farther by debilitating draſtic cathartics, which carry off the very nutritious particles that would reſtore the relaxed fibres to their due tone, and thereby effect it. The action of the body depends on the elaſticity, ſtrength, and configuration of the ſolids; and theſe, on the quantity and quality of the contained fluids. The evacuation of the water by paracenteſis does not remove the cauſe; but, as the force and energy of diet and medicine is much clogged and impaired, and the veſicles of the lungs incumbered, as well as the diaphragm impeded in its deſcenſion in inſpiration, by the load of ſtagnating water;

water, cures have ſometimes been performed by thus drawing off the water, before the ſolids had loſt their contractile power.

Purging the belly takes off the rigor of the brain, and promotes a revulſion. I happened to relieve in two inſtances of recent mania, by ordering a courſe of laxative pills, compoſed of extract. rudi, pilul rufi, extract. cicutæ & calomel. The patients took a doſe of theſe pills every other day for two or three weeks. One of theſe caſes was occaſioned by a ſudden ſuppreſſion of the menſes.

Paralytic perſons have frequent large collections of fœces, which, though ſoftiſh, require the ſtimulus of a purge to evacuate them. Draſtic phyſic will give preſent relief, but progreſſively will weaken the inteſtines, till they eſtabliſh an habitual conſtipation. Whole white muſtard ſeed, as an aperient, and tonics, as mineral water, peruvian, eleutherian barks, &c. intermediately, are very efficacious in theſe caſes.

In melancholia, lenient phyſic, and ſuch as evacuate bile, ſuit beſt.

In leproſy, ſcrofula, and ſcurvy, draſtic phyſic is inadmiſſible, the blood and ſecreted

juices being too much impoverished. Mercury, in particular, is to be used sparingly in these constitutions, as in them its action is so quickly shown on the glands of the mouth.

For *volvulus*, or *iliac passion*, argentum vivum, to the quantity of several ounces, has been commended for widening the contraction, and forcing down the inversion of the colon; but, I apprehend, if this very ponderous body does not quickly pass the sigmoid flexure of the colon; it must do immense mischief. Indeed, nothing but the utmost extremity of danger can warrant the practice.

From retention of lymph, arises head-ach, tooth-ach, rheumatism, catarrh, corrhiza, pectoral stuffings, quinzy, apoplexy, lethargy, nervous affections, languor, dulness, dropsy, &c. In scrofula, the lymph becomes so viscous and inspissated as neither to be absorbed or exhaled; it consequently stagnates in the lymphatic glands until the vessels can no longer restrain it from issuing forth: the thinner part oozes through the skin. The meseraic glands of some become schirrus; and, as sufficient nourishment

cannot

cannot be received to ſupport the body, atrophy, or extreme waſting, enſues.

By the power of ſudorifics and external warmth, the thin lymph is expelled in the form of ſweat; and, by means of the draſtic purge, it is brought from all parts of the ſyſtem into the emptied veſſels in the inteſtines; whence it is excreted in the form of liquid ſtools. Indeed there is nothing but what may be expelled by the inteſtines, until the body is reduced to a mere ſkeleton.

No well-meaning perſon will give draſtic phyſic during pregnancy; becauſe it would affect the membranes of the inteſtines and nervous ſyſtem ſo ſtrongly, as to be productive of violent ſpaſms, and ſtimulate the uterus to an expulſion of the fœtus, at the riſque of the mother's life.

After delivery, at the full time, it is expedient to give ſome lenient phyſic to promote the lochial diſcharges, to clear the habit of ſordes accumulated during geſtation, and to prevent purpureal fever.

Though, in hot uterine affections, relief is obtained by repeated refrigerant purgations, and the tepid-bath, yet I have known an hyſterical woman, who, after delivery, had,

from repeated large doſes of draſtic purging ſalts, a dangerous increaſe of her ſymptoms*.

For flushing heats and fiery eruptions on the ſkin, purging ſalts, or ſea-water draughts, are commonly recommended; and, in many caſes, if well-timed, they are of infinite uſe†. Theſe are termed coolers; but, whatever be their effect, poſt operationem, no medicines can properly be ſaid to be coolers, which, during their operation, induce heat and thirſt, even to the febrile degree: for which very reaſon it is, that ſea-water draughts are efficacious in the cold chronic diſeaſe, but not in the acute or inflammatory.

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* Je ne conſeillerois jamais de trop inſiſter à ces ſortes de *ſels purgatifs*, parce qu'ils donnent toujours trop de mouvement au ſang, et qu'ils produiſent ſouvent chaleurs d'entrailles brulantes. A Monſieur Deidier.

† There is a great difference in the quality, though not in the appearance of ſome purging ſalts, as between the true and factitious Glauber's ſalts; the latter is more nauſeous, diſagreeable and ruffling in its effects than the genuine. To diſcover the cheat, add to their clear ſolution, ſome ſalt of tartar, or other alkaline ſalt; and, if no change happens, and the mixture continues tranſparent, they are the true: if turbid and milky, and the powder ſubſides, they are the counterfeit.

The operation of ſea-water is quick and eaſy, and is the proper phyſic during a courſe of ſea-bathing. The only danger is in the exceſs; for, though it quickly paſſes the primæ viæ and carries off with it many of its own ſaline particles; yet, if it is taken in very large quantities, and long perſiſted in, it will contaminate the nutritive juices, impoveriſh the blood, and induce a pernicious intemperies, even thoſe very diſeaſes, the ſcurvy and leproſy, which it is ſo remarkably famous for curing.

An Officer in the Eaſt-India ſervice, on his paſſage home to England, happened to have ſome hot pimples come out on his face; for which he was adviſed to drink ſea-water. This, at firſt, he thought did him good, and improperly continued drinking it, day after day, till it ſo far impoveriſhed his blood, that, when he arrived in London, his face had an appearance of leproſy. He then had recourſe to Norton's mercurial drops; which, inſtead of curing his diſorder, ſtill thinned his blood more, and exaſperated his ſymptoms. In that ſtate, he applied for my advice. I ordered him to drink a draught of ſweet-wort every morning; to live regularly

on plain and unſeaſoned food, and to drink ſome generous red Port wine at dinner; by which, and the uſe of daily exerciſe, on horſe-back, he perfectly recovered in a ſhort time.

Sea-bathing, however, is very efficacious in a variety of diſorders; ſuch as glandular obſtructions, chronic rheumatiſm, ſcurvy, leproſy, depreſſion of ſpirits, palſy, epilepſy, St. Vitus's dance, hyſteric and hypochondriac affections, and in nervous complaints in general: in fluor albus, gleets, or ſeminal weakneſs, diabetes, ſprains, rickets, and in almoſt all complaints ariſing from relaxation of the ſolids; in profuſe and in ſuppreſſed menſes from debility, and not from inflammation or plethora.

Sea-bathing has alſo been recommended by Boerhaave for the bite of a mad dog before ſymptoms of hydrophobia appear. When that dreadful ſymptom comes on, I apprehend it cannot be ſuppoſed that the infection acts any longer in a ſlow and occult manner; but, that, by a ferocious quickneſs, it forces through the ſyſtem to deſtroy the vital principle; and therefore, that the moſt ſpeedy and moſt powerful oppoſition that can

can be deviſed, both internally and externally, ſhould immediately be made to obviate its effects. As the hydrophobia is a nervous ſpaſmodic ſymptom, antiſpaſmodics may be ſuppoſed to be particularly efficacious; the power of theſe, however, is very inadequate to the ſtrength of the virus. Venæſection does no good. Mercurial alterants and local evacuations from the wound, by ſcarification and cupping-glaſſes over it, and keeping the part open a long time, for the virus to run off; beſides other evacuations, by ſweat and urine, are moſt to be depended on: but no ſpecific is yet diſcovered that has power to ſubdue animal poiſon, when once it has entered the circulation. Dipping in the ſea, has, at leaſt, one good effect, if it appeaſes the mind. Miſerrimum eſt genus morbi. I am afraid an implicit faith in noſtrums has often been productive of much miſchief.

However congenial ſea-bathing is to human nature, even in caſes ſo very oppoſite in their cauſes, as ſuppreſſed and profuſe menſes, yet it is no univerſal panacea: for, if it relieves ſome complaints, it nevertheleſs exaſperates others; ſuch as gout, which it

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is apt to throw on the brain; inflammatory complaints; febrile heats; phthyſis pulmonalis, or conſumption of the lungs, and other diſeaſed viſcera; and where there is danger of hœmorrhage from plenitude or exceſſive diſtention of the blood-veſſels; which is proof of the heating quality of ſea-water, whether uſed internally or externally.

Sea-bathing ſoftens and cleanſes the foul indurated ſkin, promotes the inſenſible diſcharges, and prevents the approaches of diſeaſe. Thoſe ſeamen who bathe in the ſea, are the moſt healthy and moſt active men in the ſhip.

The preferable ſeaſons for ſea-bathing, are early in the Summer, and towards the end of the Autumn; that is, thoſe ſeaſons when the weather is neither too hot and relaxing, nor too cold and inclement. The efficacy of the water depends on the temperature of the weather as well as on the ſpecific properties of its principles. Our Summer, however, is ſeldom ſo hot as to render bathing improper.

If, on immerſion, the ſtimulation and reſtriction of the heart and arteries ſhould

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ſo far increaſe the momentum and velocity of the blood through the extreme veſſels, as to produce a pleaſant glowing warmth on the ſurface of the body, an elevation of ſpirits, activity and an appetite for food, the bather may reſt aſſured, that it is giving additional tone and force to the debile languid ſyſtem: a reverſe ſenſation is proof of the reverſe effect. Long continuance in the water, weakens. The efficacy of the water is ſometimes prevented by a patient's antipathy to bathing. But, by the ſoothing attention of an humane, judicious and encouraging guide, that unreaſonable antipathy is almoſt always overcome.

Though I have long attended to the effects of ſea-air, ſea-water, and ſea-bathing, on the healthy as well as on the diſeaſed, yet, being anxious for more full information on theſe ſubjects, I went to Margate laſt ſeaſon, 1786, where my former opinions were confirmed by the many opportunities I ſought to make freſh obſervations, and by the very uſeful information I received from that ingenious and ſucceſsful practitioner Mr. George Slater.

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The firſt caſe preſented, was that of a Mr. Willis from London, a Gentleman about ſixty years of age, whoſe legs had been in one continued ſcorbutic ulcer, from the knee down the anterior part of the tibia to the foot, and which had long reſiſted the ſkill of the Faculty. With the idea of its being almoſt a loſt caſe, he went to Margate a few months before the time I met him, when his legs were compleatly healed; and he was, not only in that, but in every other reſpect, in perfect health. He alternately drank the water one morning and bathed the next.

A Gentleman from London, between fifty and ſixty, had been ſeized with a hemiplegia, or palſy of one ſide, attended with the loſs of ſpeech, and difficult deglutition. He had been for ſome months under the care of the Faculty, and twice at Bath; the firſt time, for the ſpace of ten weeks; the ſecond for ſeven; but receiving no relief, he had got to Margate, where for ſome months he had bathed every other morning and intermediately drank the water, when I met him at Philpot's. He had then regained his ſpeech and power of ſwallowing, could walk and

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get into his carriage with a very little help, and was alſo daily gaining ſtrength in his ſide.

When I went to Margate, in the autumn of laſt year, after publiſhing the firſt edition of theſe few remarks, I there had the pleaſure of meeting again this gentleman, who could walk ſurpriſingly well, without help; which is a ſtill farther proof of the ſea-bathing being ſtimulating, warming, and reviving to the cold and languid ſolids; and, that it increaſes the mobility of the interrupted nervous power in a debile part. Although the Bath-waters were not of ſuch ſenſible benefit as the ſea-bathing to this patient, yet, I have no doubt, but they were an excellent preparative for the ſea-bath.

A young Lady about twelve, who had been two years afflicted with St. Vitus's dance, was alſo there; and, by bathing through the ſeaſon, and occaſionally drinking the water, ſhe received a perfect cure.

The following caſes were given me by two careful and attentive Proprietors of the principal bathing houſes.

1. A Lady, from the irregularity of her menſes, had a large indurated ſwelling on both

both sides of her neck, extending from ear to ear, and attended with symptoms of great debility; but by bathing in the sea for about six weeks, and intermediately drinking the water, the monthly visitation became regular; the swelling totally disappeared; and, in a word, she was restored to perfect health.

2. Two infant brothers were overspread with running sores, so very fœtid as, whenever they were bathed, to render it necessary for the doors of the machine to stand open, to ventilate it before others could go into it: but after they had drank the sea-water occasionally, and been dipped daily for four months, during the first fortnight of which time the discharges increased and then gradually diminished, the children were thereby restored to perfect health, and continued so three years after their cure, when I received the above account of them.

3. A Lady, after delivery, went to Margate in so very feeble a state, as to require, for some time, to be seated in a chair, and let down from the machine into the sea. However, after staying at Margate for a few months, she left it in good health and spirits.

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I recommended a rheumatic patient, who had been long ſubject to the complaint, and attended by other Gentlemen, to try the force of ſea-bathing. He went to Brighthelmſtone; where, after frequently bathing in the ſea, and finding himſelf chilly on coming out, and his inflammatory ſymptoms increaſe, his Apothecary judiciouſly directed him to try the warm ſea-water bath. After bathing in it three or four times, he found himſelf relieved of all his obſtinate ſymptoms, and returned home in ten days to his family.

The tepid ſea-water bath is not only more pleaſant, but, where bathing is neceſſary to take off inflammatory ſpaſm, it is better than the cold ſea-water bath.

Though I have now obſerved on all the principal leading morbid affections in which ſea-bathing is experienced to be efficacious; and on ſome, at certain times, and under certain circumſtances, in which it is hurtful, and ſhewn ſome inſtances of almoſt incredible cures which have been made by it; and, though many thouſands more might be given of its great ſalutary power; yet, I would adviſe none to enter raſhly upon a

courſe of ſea or other bathing, without the ſpecial advice of ſome intelligent medical Practitioner: it being a received maxim with Phyſicians, that what is capable at one time of doing good, is capable at another of doing harm.

It is not the ſea-water only that is beneficial, but the ſalubrity of the very air has a wonderful effect in exalting the ſpirits, creating appetite, promoting digeſtion, ſecretion and excretion, and exciting reſt.

When ſea-bathing has been neceſſary, but by diſtance impracticable, I have ſubſtituted a ſtrong ſolution of bay-ſalt in ſoft water. I have alſo ſucceſsfully uſed an embrocation of common brine with friction for rheumatic, ſcorbutic, paralytic, leprous, tetterous and ſtrumous affections. Hippocrates recommends ſea-water for bathing the ulcerated legs of fiſhermen, and thoſe who live near low, ſea-marſhy places, to forward exfoliation and incarnation, and for ſtimulating and ſtrenthening the weak fibres. Sea-water, however, is but a ſlow antiſeptic.

Mild aperient land-ſprings act beneficially as alterants, and ſuit in many caſes where ſtronger impregnations, ſuch as ſea or Jeſſop's

ſop's well water, would be improper: they ſoften the tenſe fibre, aſſiſt the appetite, and promote digeſtion. But, however uſeful they may be in a variety of diſorders, the perſeverance of the patient muſt always be proportioned to the ſtrength of the conſtitution and the power of the water; for the nature of waters, as of diſeaſes and conſtitutions, are various.

Where the great and laſting change is to be made by the alterant ſpring, it muſt not only be uſed for a conſiderable time, but alſo in the proper ſeaſons.

We muſt always be attentive to nature, conſider her power, and be guided by its effects. For extracting the virtue of whatever is intended to nouriſh, to ſtrengthen, or to relieve, no proceſs is equal to that of the ſtomach itſelf, upon animal and vegetable ſubſtances. For inſtance, if a dram of rhubarb be taken in powder, it will have as much effect as a dram and a half in any preparation whatever. Some ſtomachs in health, can diſſolve bones; and moſt ſtomachs, in ſickneſs, will receive and accommodate themſelves to medicines they would recoil at in health. Mineral and

foſſil ſubſtances are not ſo reducible as the animal or vegetable to the capacity of the ſtomach without chemical preparation, nor even then, though many ſuch preparations, when properly corrected and judiciouſly adminiſtered, are exceedingly uſeful. Even arſenic itſelf, the moſt powerful mineral poiſon, may be rendered ſafe and efficacious; for many of the moſt potent ſalutary virtues are lodged in the moſt virulent poiſons. Arſenic, when guarded and applied externally, is ſaid to poſſeſs the power of curing that deadly corroder the cancer; and ſome have avowed its internal efficacy in the ague*. The moſt violent cathartics have their correctors, and the moſt virulent poiſons their antidotes. Sulphur powerfully counteracts the ſtimulus of mercury, as a ſalivant, without ſuſpending its effect as an alterant; but

* For its ſpecial action and effect, when given internally, ſee the late ingenious Mr. Juſtamond's account of the methods purſued in the treatment of cancers and ſchirrous diſorders.—"Externe nil magis ulcera cancroſa curat; & in cancro ulcerato fit remedium ex rad. ari ppt. arſenico ſublimat. dulc. & pauc. fulig. optime autem tollitur ejus acrimonia fixando cum nitri p. iij. in crucibulo ſimul fuſis, vel abſtrahendo ſpir. nitri ter."

ETMULLERUS.

but it cannot be ſuppoſed that this can be done without its entering the circulation; though ſome of high note ſay, that Æthiop's mineral, a combination of mercury and ſulphur, is inert, and does not go farther than the firſt paſſages; while we obſerve it to be excellent in clearing the ſkin of foul defedations, and, of courſe, correcting the fluids. Sulphur taken internally renders the ſilver in the pocket black, and emits a ſtench from the pores that no perfume can diſguiſe. Sulphur is aperient: but, if taken very frequently, will cauſe heat and pain in the urinary paſſages. Sulphur not only counteracts the ſalivating power of mercury, but is ſuppoſed, and is ſaid, to be a ſpecific againſt that of arſenic*.

After violent purgation, Hippocrates adviſes, as quoted by Ætius, to put the patient into a warm bath, and to give him a gene-

* Sulphur united with any of the metals probably deſtroys their ſolubility in the juices, or at leaſt their effects in the circulation; none of the cinnabars act either as ſulphur, or mercury. Crude antimony, which is regulus of antimony and ſulphur, has no effect. Arſenic when joined with ſulphur has no effect, nor has iron. Hunter's Treatiſe on the Lues Venerea.

rous yellow white wine, before and after bathing. The ſtimulus and commotion may be quelled by a few drops of thebaic tincture; but much better by ſome grains of the extract. cicutæ, which is an excellent and ſafe corrector of the reſinous cathartic, without leſſening its purgative quality.

There are various methods of promoting evacuation from the inteſtinal canal when conſtipated, or when the ſtomach is incapable of receiving, and the throat of ſwallowing.

1. *By clyſters*; which are of two kinds; moiſt and dry; and theſe again are varied according to the intention and nature of the complaint.

Clyſters of ſimple water, adminiſtered once in twenty four hours, promote perſpiration, dilute the blood, abate thirſt, and remove ſpaſm; they conſequently are uſeful in febrile complaints.

The next in ſimplicity are ſea-water, milk-and-water, whey, or bran-water clyſters. I have often preſcribed theſe, or chamomile tea, and a little common ſalt, and procured motions when ſtronger purging clyſters failed.

failed. New-milk and oil clyſters admirably qualify the corroſive parts of a medicine, and arm the inteſtines for making a defence againſt theſe and ſharp particles in the juices which occaſion ſpaſms and gripes. As whey does not congeal, as the ſerum of the blood does by heat, it is a ſafe cleanſer and diluter.

Laxative clyſters will quickly exonerate the inteſtines; but a very frequent uſe of them, or, indeed, of other relaxing and deterging ones, at firſt ſight, would appear to be injurious: they carry off the nutritious with the recrementitious parts, leſſen the tenſion of the fibres, and render them unable to perform their animal functions. On the other hand, however, there are many inſtances of life being ſupported and maintained, for a conſiderable time, by nouriſhing clyſters. Hildanus tells us, that Aubery, a Phyſician, fed a woman of quality ſix weeks with clyſters of fowl-broth and yolks of eggs, adminiſtered twice a day.

This nouriſhing power of clyſters is not eaſily conceived, as all the nutritious materials ſeem to undergo a neceſſary previous

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preparation in the ſtomach for being converted into chyle; and yet certain it is, that I have not only ſupported patients by theſe for days, but even effected their cure by medicinal clyſters. Aſclepiades, and ſome others of the ancients, were of opinion that clyſters were ſufficient in moſt diſtempers. They influence the maſs of blood, for they quicken the pulſe, and facilitate the ſecretions of ſweat and urine. Therefore every thing foul or incongenite ſhould be as carefully withheld from the inteſtines as from the ſtomach.

Clyſters are admiſſible at any ſtage of a fever. They alleviate the pain of the ſtone-cholic and hœmorrhoides; and are ſerviceable in bilious, remitting and intermitting fevers, dyſentery, lientery, teneſmus, ſuppreſſion of urine, cephalalgia or head-ach, lethargies, apoplexies, deliria, &c. Aperient clyſters, in the time of labour, aſſiſt the birth and expulſion of the ſecundines. Opiate clyſters have the ſame ſleepy effect as opiates taken by the mouth; and, if they check diarrhœa, it is by ſuſpending the periſtaltic motion, not by removing the cauſe.

Opium does not remove the cauſe of any diſorder whatever; it only procures a truce, not

not a peace. It ſuſpends the criſis of gout, rheumatiſm, hyſteria, &c. and prevents a diſcovery of their true type; and does not act favourably to the expulſion of the morbific matter. It is not poſſeſſed of antiſeptic power; for it rather promotes putridity. Evacuation ſhould always precede its uſe. It almoſt always does miſchief. I have ſeveral times ſeen, and often had too much reaſon to believe, that infants have been thrown into an endleſs ſleep by this poiſonous drug, which ſtops the motion of the heart, and diminiſhes the power of the ſenſorium commune of the brain. We are told, a dram of animal poiſon, received into the ſtomach, had not ſuch violent effect as an hundredth part of a grain of opium transfuſed immediately into the blood. It ſeems to act two different ways; for while it ſtupifies the ſenſe and ſuſpends the action of the ſolids, it alſo expands and rarifies the blood. Proſper Alpinus tells us, that thoſe who have been in the habit of taking opium in Aſia, fall into the moſt lamentable melancholy and lowneſs of ſpirits, from which they often relieve themſelves by a halter.

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Avenzoar is said to have been the first who proposed clysters: and, that he took the hint from the bird ibis, or stork, which, by means of its beak, or bill, when nature indicates the necessity of a motion, conveys salt-water up its anus*.

The *dry clyster*, such as the active volatile smoke of tobacco, has succeeded by its stimulating and contracting power in obstinate constipation; and is of use in cholic, apoplexy, lethargy, prolapsio intestinum, strangulated hernia, &c. and when blown up the vagina into the uterus in a suffocation of that organ, which is attended with difficulty of breathing, straightness of the præcordia, syncope, &c. it has produced instantaneous relief. And, I have no doubt, with professor Cullen that, if thrown up the vagina, it would likewise relieve the obstructed menses. Sydenham prescribed it in iliac passion: but he was, by no means, the first who thus applied it. In some cases I have preferred an injection

* Quæ rostro clystere, velut, sibi proluit alvum
Ibis, Niliacis cognita littoribus.
Emblema LXXXVII. Andriæ Alcati.

injection of the eſſential ſmoke of cephalic herbs.

When the embotum, or inſtrument for conveying the ſmoke of tobacco was not at hand, I have, as a ſubſtitute, ordered an infuſion of the leaves of tobacco (that is, two drams of tobacco to eight ounces of water) to be injected. As this is a very active ſtimulant, it muſt be cautiouſly uſed in the irritable nervous habit, leſt it bring on tremors, ſpaſms, ſickneſs and vomiting; which it is apt to do, eſpecially, if made very ſtrong.

2. *By ſuppoſitories or medicated cones.* Theſe have procured a motion when the indurated fœces or flatus prevented the admiſſion of a clyſter.

The ſuppoſitory has this peculiar advantage; it occaſions no flatulent diſtention: the great operation, however, is not to be expected from the effect of the mere dry ſtimulus on the ſphincter ani.

3. *By daſhing, or throwing cold water on the thighs and abdomen.* This is recommended by ſome for ſtimulating the bowels to an expulſion of their fœcal contents; and, in hot climates, it may poſſibly be ſometimes ſucceſsful.

4. *By*

4. *By electricity.* Electrifying the region of the abdomen powerfully, occaſions an inteſtinal diſcharge, by promoting the periſtaltic motion, and ſecretion of mucus. I have, ſeveral times, in long and obſtinate conſtipation, relieved by electricity, when many other means were ineffectual.

5. *By the application of medicines to the external ſuperficies of the ſkin.* Aloes or coloquintida, applied to the umbilical region, will purge. A decoction of hellebore, uſed as a bath for the feet, has a ſimilar effect. When cataplaſms of garlick are applied to the ſoles of the feet, the ſcent is diſcovered in the breath. A cataplaſm of tobacco-leaves on the ſtomach or feet, excites vomiting. Toaſted parſley applied to the umbilical region of a child, has provoked urine; and by applying toaſted ſorrel-leaves, to hard deep-ſeated tumours, I have brought them in a few hours to maturation; and, the more indolent tumours of the parotid glands to reſolve and diſperſe in a few days. The latter application was made morning and evening. If the tumour was diſpoſed to maturate, it gave ſome little pain. But the influence of medicine topically applied to the ſuperfices of the ſkin, is not merely an evacuation

evacuation. Galen relates, that an opiate plaiſter applied to the head of a gladiator, by a ſtratagem of the enemy, killed him. Geoffroy ſays, "Capitis futuris applicatum non "nunquam interimit: nervos relaxat, ſtu-"porem & paralyſin inducit." Again, "if "opium is externally applied to the eyes or "ears, it will deſtroy the functions of theſe "organs." On the other hand, I have repeatedly allayed ſingultus or hiccup by ſedatives; as, by a cataplaſm of theriaca andromachi on the region of the ſtomach; and, by virtue of the bitter vermifuge on the umbilical region, diſlodged worms from the inteſtinal canal. By the tonic and ſedative application to the abdomen, the dyſenteric tormina has been quieted, and a check given to the flux, when the common internal remedies were ineffectual: by a ſimilar application of the Peruvian bark, moiſtened with ſpirit of wine, I have often cured agues in children; and relieved the head of delirium in fever by a cataplaſm of ſalt-herring to the ſoles of the feet. I have alſo given relief in dyſenteric tormina and teneſmus, by expoſing the patient to the ſteam of turpentine upon live coals, in a chaffing-diſh,

placed in a close-stool; and, in like manner, the hœmorrhoides by sulphur. The simple application of a large slice of toasted bread dipped in claret, in which some cinnamon was boiled, and repeatedly applied to the umbilical region, stopped flooding, and preserved life when almost exhausted. The relief is notorious that is obtained, in visceral parts, by the application of fomentations, baths, oily, and spiritous liniments, cataplasms, &c.

Infectious aerial miasma, and vegetable and animal poison, are received by the inhaling absorbents, wherever there is a secreting surface, as well as by inspiration and deglutition; and, by the antidote applied externally; such as mercury in lues venerea, many infections are subdued. There are instances of indurations of the liver in dropsy, being resolved by the application of mercurial ointment to its region.

It cannot be supposed, that the gross and hard substances of cataplasms, or plaisters, are taken up substantially by the absorbent system, as they are neither diminished in their bulk, nor weight, when taken off; for, as they are then inert and inactive, it is evident, that, while in their full and active state,

ſtate, there was either an influence of a ſpecific ſtimulant, or a ſpecific ſedative, and alſo an abſorption of their fine eſſential and active parts, to effect a conſent of that which is remote with that which is near.

CHAP. IV.

On Evacuation by Perſpiration.

PERSPIRATION is either natural, ſymptomatical, critical, or artificial; which are again two-fold: viz. *ſenſible* and *inſenſible*.

Senſible perſpiration, commonly called ſweat, by its ſubtle volatility, quickly evaporates and leaves the ſkin dry. In hot climates, the ſaline particles thus excerned, are ſeen condenſed upon the ſuperficies of the ſkin and the cloaths

That gentle perſpiration, which is abſolutely neceſſary for purifying the blood and ſecreted fluids, can only be preſerved by due exerciſe, temperate air, comfortable warmth, and cheriſhing diet. Theſe give ſtrength to the body and alacrity to the mind.

The profuſe perſpiration that ariſes from

increaſed circulation, by moderate heat, or eaſy motion, is occaſioned by a repletion of blood, with a large quantity of aqueous parts. Strong, firm, and elaſtic bodies ſweat leaſt, but inſenſibly perſpire moſt. Sweat, in common, is moſt obvious in thoſe who are remarkably plump and fat; for the profuſion of their fluids relaxes the cuticular paſſages, and thereby over-balances that equipoiſe, which the ſolids would preſerve.

When there is laxity of the ſudorific ducts, there is alſo that of the whole ſyſtem. To rectify the error of the former, attention muſt be paid to the whole; that is, by diet, drink, the cold bath, exerciſe, and ſuch things as give elaſtic tone and contractility to the ſolids, and due conſiſtence to the fluids. Sweat cauſed by an error in the non-naturals is always hurtful. An accidental ſweat is often beneficial.

Partial deſudations on the face, neck, and thorax, are ſymptomatical; for, as they always come on before diſeaſe has attained its height, or concoction is performed, they are productive of no advantage: on the contrary, if they do not prove fatal, they indicate, at leaſt, a great debility, and long continuance of

of the diſeaſe. Cold clammy ſweats, either profuſe or partial, if of ſhort duration, portend a more ſpeedy though not leſs fatal event.

If acute diſeaſes are ſucceeded by acid ſweats, and an alkaleſcent diſpoſition prevails, that ſymptom is ſalutary.

When native alimentary moiſture is evacuated by the perſpiration that is excited from a daily return of febrile hectic heats, colliquation and emaciation ſucceed. Colliquative ſweats extinguiſh the natural heat; thoſe which are critical, extinguiſh the febrile.

The weakneſs of the natural faculties, and ſtrength of the enfeebling diſeaſe, is ſhewn by nothing ſo much as by imperfect ſweats attended with a coldneſs of the extreme parts.

The copious ſweat that ariſes on the feet, and diffuſes itſelf gradually over the body, towards the acme or height of fever, is critical; and is not only ſo in fever but in other diſeaſes: it ſhews the vital faculty is ſtrong. The blood, by ſuch ſweat, is relieved of arthritic impurities. *Dum pedes perſpirant nulla podagra.* While flannel can

preſerve perſpiration on the region of the ſtomach, the gout will not attack it.

Thoſe whoſe ſkins are ſoft and pores lax, may, it is true, have the gout; but they have it by no means ſo regular, or ſo ſevere, as thoſe who have a conſtricted dry ſkin. Exerciſe, friction and baths, by giving elaſtic tone, contraction, concuſſion and vibration to the fibræ motrices, promote the circulation, perſpiratio retenta, and other matter left upon the habit that oppreſs it. The blood which, by indolence, receives no acceſſion to its acceleration, is changed, like the ſtagnating pool, to the putrid or depraved ſtate, according to the prediſpoſition of the habit, or, as it occaſionally happens, by inattention to the non-naturals. Indolence is ſo great a prediſpoſing cauſe of ſea-ſcurvy, that nothing, without the concurrence of exerciſe, will cure it. Exerciſe braces the animal fibres, promotes digeſtion and aſſimilation of the chyle: reſt, or a defect of motion, has the reverſe effect: that is, it relaxes and retards digeſtion.

The ſweat of the febrile patient, by a high exaltation of the ſaline principle, becomes fœtid and offenſive. It is better that it

it flow from than remain in the habit; for, like conſtitutional ſweatings, if precipitately checked, it will create diſeaſe: ſuch as cough, catarrh, rheumatiſm, gout, dropſy: if it fall on the inteſtines, a diarrhœa enſues; if on the renal organs, a diureſis, or large diſcharge of urine; if on the pleura, a pleuriſy; if on the lungs, a peripneumonia notha, or a dyſpnœa; if on the joints, a rheumatiſm, or gout; if on the loins, a ſciatica; and ſo of other parts.

The ſweat that ſucceeds the febrile paroxyſm is rather ſymptomatical than critical. The ſtronger the paroxyſm, whether febrile, hyſteric, or epileptic, the nearer and more certain is the cure. I never knew them terminate kindly to the conſtitution by a gradual declenſion, and by ſmall ſweats.

Phyſicians order artificial ſweats, in imitation of the genial ſpontaneous and critical ſweats: they ſeldom fail of doing good, when opportunely raiſed.

Lochial fever, which ſo ſoon becomes putrid, may be ſpeedily ſuppreſſed by a long and well ſupported diaphoreſis. Out of a conſiderable number of ſuch patients for

for whom I have preſcribed, and never loſt one, I ſelect the following pointed caſe.

In 1784, A Lady, about thirty, ſoon after delivery of her firſt child, had *after-pains*, which, by next day, were very violent. She was then attended by that humane and judicious Accoucheur, Mr. Welſhman of Newington-Butts, who, ſoon after delivery, gave her the following draught* to compoſe her, and keep up a gentle perſpiration. Though ſhe repeatedly took that draught, her pains were not in the leaſt mitigated. The mammæ were alſo much pained and diſtended; the pulſe quickened, and other febrile ſymptoms appeared. She had no motion on that or the next day, when he gave her an aperient draught†; and for her breaſts an embrocation‡.

On

* ℞ Pulv. contrayv. comp. ℈i.
Elixir paregoric. ʒſs.
Syr. balſamic. ʒi.
Aq. Puleg. ʒxiv. m. f. hauſtus 6tis. horis ſumendus.

† ℞ Infus. ſennæ ʒxiv.
Tinct. ſennæ.
Tartar. ſalubil. a a ʒij. f. hauſtus ſtatim ſumendus.

‡ ℞ Acet. diſtillat.
ol. amygd. duli. } a a ʒi. m. f. embrocatio.
Spir. viu. ter.

On the third day, when the after-pains were highly increaſed, and attended with additional cholicky pains, and ſtill without motion, I was conſulted by letter, and ſent her a preſcription*. I alſo ordered her to ſit over the ſteam of warm water. By miſtake of the nurſe, ſhe took the whole of one julep at twice: in five minutes after taking the firſt part, ſhe was conſiderably eaſier, and it produced a gentle perſpiration. In half an hour, ſhe took the remainder. After that, ſhe was perfectly at eaſe. The diaphoreſis increaſed and laſted till next morning, when ſhe found herſelf in perfect health, and her pains returned no more. Her breaſts ſubſided, and ſhe was otherwiſe relieved without the aid of phyſic.

At the ſame time, her infant had violent griping pains, for which I alſo then preſcribed

* ℞ Aq. menth. piper. ſimpl.
— cinnamom. ten. a a ℥iij.
Tinct. caſtor. ℥iij.
Pulv. contrayerv. comp. ℈ij.
Extract. cicutæ ℈i.
Syr. e corticib. aurantior. ℥i. f. julepum; cujus capiat cochliar. ij. quaque hora donec remiſerit dolor. ——

ſcribed†. The child, after taking a few tea-ſpoonfuls, ſlept five hours, and awaked perfectly eaſy and quiet.

Laudanum, unfortunately, is in too general uſe, but long experience and humanity urges me to ſay that, in every reſpect, ample and decided proofs have been given me of the ſuperior excellence of cicuta.

The *artificial ſweat* does not flow kindly without the aid of external heat. It however, muſt be obſerved, that the exceſſive heat does not rarify, ſubtilize, or ſeparate; but, like ardent ſpirit, burns and condenſes. It is the moderate and genial heat that expands

℞ Emuls. commun. ℥iij.
Mannæ calabriæ ℥ſs.
Tartar. ſolubil. ℈ij.
Aq. nuc. moſchatæ ℥iij. f. hauſtus ſtatim ſumendus.

† ℞ Rad. rhubarb. opt. raſur,
— valerian. ſylveſtr. a a ℥ſs.
Sem. coriandr. contus. ℈i.
Aq. Bullient. ℥iij. ſtent ſimul per horas xij. Coloturæ turbid. add
Aq. juniper. comp. ℥i.
Extract. cicutæ. gr. vi.
Syr. Balſamic. ℥iij.
— e meconia ℥ij. f. miſtura: Detur cochleor minimum (a tea-ſpoonful) ſæpe in die.

pands the cuticular paſſages, attenuates the fluids, and clears the habit: the blood, however, muſt be diſpoſed for this effect, before it is too much forced; which is ſeldom the caſe, unleſs the previous evacuations have been made, and more eſpecially if the phlogiſtic feveriſh diatheſis prevails. When the ſigns of concoction appear after this, that is the beſt time for increaſing the action of the veſſels, and giving motion to the fluids in their ſeparation *. Sudorifics may be conſidered as poſſeſſed of a threefold power. They are attenuant, reſolvent, and deobſtruent: they alſo are inſpiſſant, condenſing, and obſtructing; for that which remains of the maſs of blood after the latex or thinner part is diſſipated, is in ſo denſe and coagulated a ſtate, as hardly to be reſolved by art.

The means uſed to raiſe ſweat are various, and adapted to the nature of the diſeaſe, and to the ſtate of the patient's conſtitution. Some are raiſed by external means, as by the vapour or fumigating bath, which is not only the moſt pleaſant, but the moſt effectual, either

* Natura enim ſemper intendit mundificari ſanguinem, dum ſeparat quod officit. CELSUS.

either for an incipient or long ſtanding diſeaſe.

Although the alkaline ſudorific and antiacid diet moſt readily attenuate and break aſunder increaſed coheſion of the animal fluids, even if continued to the looſe putrid degree, yet none but Homberg and Lemery have imagined they diſcovered an acid exiſted formally in the blood; and probably their experiments were made on diſeaſed blood. That an acid, as well as an alkaline acrimony ſometimes is preſent, I imagine is generally allowed. "Some," ſays the illuſtrious profeſſor Cullen, in his Materia Medica, "have "entered with great ſubtelty in their en- "quiries into the different kinds of acri- "mony; but it appears to me, that we are "only acquainted with two ſpecies which "are the ſource of the reſt; viz. the acid "and the alkaline. Moſt part of our fluids "are formed either originally, or have a "tendency to become acid in the ſtomach; "and therefore, we may ſuppoſe an acid acri- "mony even ſometimes to enter the ſyſtem "and to prevail there." Again, "It is "found to be the conſtant effect of the œco- "nomy to convert the acid into an oppoſite "acri-

"acrimony." "Some," he says, "affirm "that this is a perfect alkali; but all agree "it is of an alkaline nature."

As acid is so opposite in its nature to milk, chyle, or blood, that it occasions them to coagulate; it therefore is evident, that the too liberal use of acid is improper, as it does not make the mixture uniform.

The gouty habit is much annoyed by acidities in the primæ viæ; and persons who drink acid liquors soon find them productive of pains in the joints and extremities, similar to those of the gout and rheumatism; which disorder being remarkably frequent in cyder counties, and in countries where sharp, acid, and austere wines are in common use, these, and all acid liquors, have therefore been generally suspected as promoters of such complaints.

Some, as Doctor John Armstrong, suspect a subacid acrimony to be lurking in the gout. It is of consequence to know this, as it would give a key to the treatment of the disease.

The volatile alkaline sudorific, before the accession of the autumnal febrile quartan, or tertian paroxysm, by increasing the

action of the solids, gives motion to the fluids, and promotes sufficient heat for obviating the cold fit; but during the inflammatory spasm, when the circulation is increased, it cannot be given with advantage. The tonic astringent and volatile alkaline in the intermission, after the primæ viæ has been cleansed, and perspiration restored, shew their roborating, antispasmodic, and antiseptic power. But these two very important medicines, are still more dangerous during the paroxysm of the vernal intermittent, because that has more of the inflammatory diathesis. In this fever I have generally used the neutral saline mixture, with some extract. cicutæ and camphor, and found them antispasmodic, diaphoretic and antefebrile; for they either obviated or lessened the force of the fit.

The volatile alkaline cures a cough, and is serviceable in catarrh, diabetes, dropsy, rheumatism, dysentery, and lientry, by diverting the acrid stimulating serosities that, by a constriction of the surface, might fall back on the intestines or other internal parts, and debilitate their tone. Upon this principle it is, that emetics and diaphoretics

are

are of such sovereign use in these complaints.

Although sudorifics relieve diseased habits, support natural warmth, and are more safe and more certain in their operation than purgatives, yet, if the blood is very often excited by hot stimulating and inflammatory medicines, they will confound the natural motions, affect the brain, and depress the mind: instead of temperating acrimony and allaying spasm, they will not only increase these, but deprave the blood; as may be perceived by the saliva and the urine acquiring a putrid fœtor. Nothing changes the type of an intermittent to a continued fever, or renders it more fixed, so soon or so certain as the immaturely forced sweat.

To force a sweat in the beginning of a miliary fever, is prejudicial; for it encourages the eruption, and thereby increases the putrid ferment. The inflammatory changes its type to the low, nervous, putrid fever, by heightening the impulse of the heart and arteries, which fixes the inflammation on the brain. The heart being thus deprived of its enlivening principle, the pulse sinks, the mind becomes anxiously despondent, the

maſs divides, and the thinner parts exude in partial ſweats.

Inſenſible perſpiration, though natural, is very different from *the ſenſible*. It is the moſt putrid diſcharge from the body, and the moſt fugitive; and exceeds the whole of all the other ſecretions. It iſſues from every part of the body. According to Sanctorius, the diſcharge of this ſubtle matter is equal to five eighths of the food. When the urine is eight ounces and the fœces four, inſenſible perſpiration is at leaſt forty. Aſtoniſhing!——Be that, however, as it may, this, we know, is certain; whenever that inſenſible fluid is ſuppreſſed or impeded, it is taken up by the abſorbent lymphatics, and mixes with the blood; in which it increaſes the ſeptic ferment, and thereby loads the habit with ſuch diſcordant particles, as lay the foundation for the moſt grievous diſorders; ſuch as gout, ſcurvy, and dropſy; which are again alleviated by increaſed inſenſible perſpiration. The quantity of this diſcharge is proportioned to the habit, the ſeaſon and climate.

CHAP.

CHAP. V.

On Evacuation by Expectoration.

THE modus operandi of thoſe things which promote expectoration, or an increaſed diſcharge of ſecreted mucus from the bronchia of the lungs, is not ſufficiently underſtood. Many ſtimuli, termed *pectorals*, are employed to give impulſe and motion to the organs of deglutition and reſpiration, for effecting this excretion, though few of them have a right to the title of *pulmonics*; nay, they rather increaſe inflammation, cloy the ſtomach, and make the ſymptoms more grievous, by their acrid and oleaginous principle.

Fume or vapour on the palate and fauces relaxes the excretories and ſeparates the phlegm; but cannot poſſibly be of the leaſt ſervice towards promoting expectoration from the glandular emunctories of the lungs, becauſe every thing groſſer than the natural

air that enters the trachea and bronchia of the lungs, creates vehement disturbance, till it is thrown off again by the force of coughing. Hence the difficulty of conveying abstergingand vulnerary remedies directly to exulcerated lungs. There is but small analogy between the healing of ulcers upon the external surface of the body, and those in the lungs; in which last, there is always a fever and inflammation. The softening mucilaginous and oleaginous bodies, allay coughing by obtunding the acrimony of the serosity separated in the glands; and the gums, such as ammoniac, asafœtida, myrrh, &c. succeed by their antispasmodic power and virtue. We cannot suppose that these bodies reach the lungs in their substantial form, nor can we suppose they would be so received by the circulation of the refluent blood. We then have no other resource but to remote application: such as the vapour-bath impregnated with medicinal herbs, and applied externally to the pulmonary region; which is very efficacious; for it relaxes the vessels, renders the matter moveable, and stimulates to an excretory motion. There is nothing that so soon or so effectually relieves partial or

univerſal complaints, occaſioned by ſuppreſſed perſpiration.

A young married Lady, by imprudently walking in the cold night-air, from an aſſembly, where ſhe had overheated herſelf by dancing, occaſioned ſuch a ſudden check to perſpiration, before her blood was permitted to cool, that, next morning, her legs, thighs, and abdomen were much ſwelled. She was alſo oppreſſed with a difficulty of breathing. The third day, when I was conſulted, the ſypmtoms were conſiderably increaſed, and there was all the appearance of an incipient dropſy. After ſhe had taken a gentle doſe of jalap and cremor tartar, I ordered her to be ſweated by the vapour-bath, ſhe had bathed but five or ſix times, when ſhe came to thank me for being perfectly recovered.

If a cough, that natural ſtimulus to expectoration, be excited before the matter is detached from the blood and while the pulſe is yet ſtrong, and the heat intenſe, as in the beginning of phthiſis, hœmoptyſis, pleuriſy, or peripneumony, inſtead of relieving, rather tends to augment the congeſtion of blood; it increaſes the cough and difficulty

of

of breathing. Stimulating expectorants, for the ſame reaſon, however neceſſary, muſt not be uſed too ſoon.

The natural criſis of cough, pleuriſy, peripneumony, or pleuro-peripneumony, and ſome putrid fevers, is expectoration. This excretion is promoted artificially by external as well as by internal means. Sailing under gentle motion, or riding ſlow on horſeback, in proper air, produces almoſt always very favourable events: it gives uncommon alacrity, increaſes perſpiration, excites appetite, and promotes digeſtion and expectoration, to the great relief of the lungs and cheſt. Hence the paſſive exerciſe of ſailing, and gentle riding, has been ſo ſtrongly recommended as particularly beneficial in phthiſis pulmonalis—a diſeaſe which, by the bye, I am far from thinking incurable, provided the patient enjoyed a previous good ſtate of health; that the diſeaſe was not originally inherent, but occaſionally acquired, and oppoſed in due time; that is, before the affection has advanced to vomica *; or tubercles † or concretions were formed in the

* An encyſted humour in the lungs.

† A viſcid impacted matter in a peculiar membrane forming knobs or ſwellings.

the bronchia of the lungs; or empyema in the cheſt*. While the diſeaſe, I ſay, is in its primary ſtage, and the inflammation has reached no farther than the ſurface of the lungs, or but a ſmall part of them is ulcerated, and the matter benign, it is more ſuſceptible of cure than is generally imagined: for I have ſucceeded in the cure of ſeveral, and know that other Phyſicians have alſo been ſucceſsful. Wherefore it is truly unfortunate for that patient whoſe relations and attendants, from a vulgar opinion of the diſeaſe, in any ſtage, being incurable, neglect to conſult the Phyſician until medicine, diet and regimen can, in reality, do no more than merely palliate the ſeverity of its ſymptoms for the remains of a ſhort exiſtence.

* Empyema, or purulent collection, within the cavity of the thorax, ſucceeds an inflammation of the lungs that has not been reſolved by expurgation, expectoration, revulſion, or criſis. The diſtending matter being too fizy for abſorption, and having no immediate vent by excretion, ſtaguates, becomes putrid and acrimonious; inflames the adjacent parts, and deſtroys quickly: abſorption and evacuation muſt therefore be procured as ſoon as poſſible, by vomition, purgation, expectoration, urine, and paracenteſis.

exiſtence.—"But when," as that elegant writer, the ingenious Dr. Hurd, emphatically declaims, "the taper of life waxes dim, and the ſpirit juſt diſembodying itſelf, ſtands hovering upon the brink of futurity, then is the Doctor called in with hue and cry: but what is his proper office, or how is he to conduct himſelf in ſo deplorable a ſcene? The poor ſufferer has exiled himſelf from the laws of medicine, and the arts of Æſculapius are all in vain! Well, he is to grace the ceremony; and, as the common, though true, expreſſion runs, to give a formal ſanction to the unhappy creature's exit: and it is well if, after all, he does not bear a load of cenſure for not being able to effect a miraculous cure."

Phthyſis or conſumption, whether pulmonic, renal, dorſal, meſenteric, uterine, or nervous, though the exerciſe, diet, and regimen be nearly the ſame in every hectic, yet their different cauſes muſt be attended to; as muſt alſo the different ſtages of the complaint; for the inflammatory, the colliquative and purulent, require very different modes of treatment. By a due attention to air, diet, exerciſe and regimen, with the occa-

occaſional aſſiſtance of a little well-adapted medicine and proper evacuations, it is, that hectic ſymptoms have a chance of being ſubdued. But, if theſe are permitted to advance till the diſeaſe is confirmed, no Phyſician, I believe, will be ſo deluſive as to promiſe beyond the palliative cure. Principiis obſta.—It is eaſier to prevent than cure. Signal advantage is always obtained by a ſedulous attention to the general rules of prevention.

CHAP.

CHAP. VI.

On Evacuation by Urine.

THE component parts of this lixivium of the blood is in proportion to the natural or preternatural ſtate of the habit, circumſtances of ſeaſon, ſituation, mode of living, and exerciſe.

On examining the urine, we attend to the quantity, colour, conſiſtence, ſmell, and taſte. If we want to inveſtigate it farther, we do it chemically by evaporation, diſtillation, precipitation, putrefaction, or mixture.

Urine is not only various in different conſtitutions and ages, but in diſeaſes. In infancy, it is ſweet; in age, acrid and fœtid; in the jaundice it is bitter; in diabetes, ſweet. Where the ſalts in the urine become ſaccharine, and more liquid is emitted than drank, there is a colliquation of the blood and fat, a defect in the natural digeſtions, and a decay of the ſolids, as may be ſeen

ſeen by the oil on its ſurface. The light amber or ſtraw-coloured urine, ſmooth and equal, without ſediment, about the conſiſtence of well-fermented and boiled beer, is the moſt healthy. The moſt natural urine ſmells offenſive.

When urine has neither ſcent or flavour, but is tranſparent and limpid, it is owing to its ſhort ſtay in the body, a laxity of the urinary ducts and want of ſanguification to give it tincture or conſiſtence.

The colour, ſcent, and conſiſtence of urine depend on the ſtate of concoction, the liquor drank, and the contractile power of the renal pipes. The more high coloured the urine, and the leſs ſediment it depoſites, the farther it is from a ſtate of concoction. When high coloured and fœtid, it abounds with attenuated volatile ſalt and oil. If groſs, and of a reddiſh, or an icteritious colour, it indicates a redundance of crude recrements, from unconcocted blood, and an imbecility of the ſecretory faculty.

The urine of the moſt healthy body, by long detention in the bladder, more eſpecially after long abſtinence, or after it has

ſtood long expoſed in a glaſs, or after digeſtion in a heat not exceeding that of the human body, becomes red, alkalious, and cadaverous. The feveriſh heat and thirſt that attend the dropſical patient is occaſioned by that change taking place in the waters from their ſtagnation. If in ſickneſs, when there is no immediate criſis of fever, there be large hypoſtaſes, or thick ſettlings in the urine, and it quickly putrifies when ſet in a warm place, theſe appearances denote the blood is broken and deficient of its ſpirituous principle.

The enæorema and nubecula, only ſhow a lighter degree of the contents from their ſuſpenſion, and that concoction is yet imperfect. A pendant white cloud towards the bottom of the glaſs is a good ſign; and, if it ſoon becomes a ſediment, it will be a ſtill farther indication of the ſuperiority of nature. When it exhibits the appearance of a blue ring on the ſurface, that is alſo a good omen. But if urine, when ſhook, retains its froth long, that circumſtance portends a tenacity of the mixture, and a difficult criſis. Putrid urine, while unmoved, is leſs offenſive to the olfactory ſenſe than

any

any other corrupt animalized body. The periodical diſcharge of turbid conſtitutional urine is the effect of a ſecret operation of nature for relieving the habit of recrementitious matter. If ſuch turbid diſcharge does not happen about the uſual time, ſome artificial evacuation muſt be referred to. —Theſe alternate turbid and clear diſcharges of urine, in the gout and other chronic complaints, indicate a long and obſtinate continuance of the malady.

—If, in the malignant and peſtilential diſeaſe, the urine be turbid and contains a black, oily, livid ſediment; or the urine and excrements be tinged with blood, accompanied with faultering pulſe, and dry parched tongue, a ſingultus then indicates the haſty approach of death. But in any other complaint, the ſingultus is more alarming than dangerous, and may be quickly ſubdued by ſedatives and antiſpaſmodics.

Though the natural ſalts in human urine be neither acid nor alkaline, but, like the ammoniacal, are partly fixed and partly volatile; yet, by violent motion, and heat in the blood, they become highly alkalious and corroſive. By the appearance of urine we

learn more of the indications of a diſeaſe, and ſtate of the fluids, than by any of the other ſecretions. When high coloured, it indicates an acid cooling diet to ſubdue the alkaleſcency. We muſt not always, however, give our decided opinion on any one unfavourable phenomena, as a loſt caſe. Nature has infinite reſources, and a multitude of ways to exonerate herſelf. She often will change the moſt unfavourable ſymptom into a good one. She, in many caſes, only requires permiſſion to exert her vaſt powers. We muſt be careful neither to do too little or too much, eſpecially in making evacuations, which, either do good or, at a certainty, do much harm.

That dire diſeaſe in the blood, which terminates in the urine, and is called *Lithiaſis*, or a diſpoſition to generate gravel and ſtone, ought to command the attention of every humane Practitioner, who alſo would do well to deliver his opinion on what is moſt likely to prevent, or to ſolve, the ſtone. Every conſtitution has a peculiar tendency to ſome particular diſeaſe; and conſequently many have to this; which, to ſpeak generally, is occaſioned, in the prediſpoſed habit,

bit, by living much on groſs, earthy, viſcid diet, and by lying much in a prone poſture, and leading an inactive life.

Laſſitude of body, parched tongue, ſlow latent fever, and ſizineſs of the blood, attends the calculous diatheſis.

Diet and regimen counteract a tendency to this, or any formidable diſpoſition in the blood and ſecreted juices. Either the acid, alkaline, or aceſcent diet makes a great change in the eſſential animal ſalts, and conſequently upon the whole conſtitution.

The diet fitteſt for thoſe who are ſubject to gravel and ſtone, is the demulcent; ſuch as barley, millet, rice, brown bread, decoction of green peaſe, honey in water-gruel, milk and water, plain water, decoction of mallows with ſyrup of violets, linſeed-tea, ſago, decoction of barley with raiſins or figs; and ſuch things as are capable of changing and diſſolving thoſe of the ſaline, ſaponaceous, mucous, and gelatinous kind, or concretions. Whey, butter-milk, aſſes-milk, goat-milk whey, during the ſpring, by being attenuant, detergent, demulcent, mitigators of pain, and correctors of acrimony, are proper.

If earthy, gravelly, ſaline or ſlimy matter, thoſe cementing principles of the ſtone, are reſident in the habit, they muſt be carried off whilſt in the looſe inadheſive ſtate, and while the urinary paſſages are ſufficiently dilated: the retention of them may give riſe to more complaints than their merely coaleſcing into calculous concretions.

Diuretic medicine, and all thin ſub-acid liquors, as they quickly paſs the urinary organs, are given to preſerve the ſtream and with it expel ſlimy and earthy particles, which are too groſs for paſſing off by tranſpiration and before they form into concretions too large for being ſent off through the meatus urinarius.

Medicines of the diuretic claſs are reſolvent, and promote a diſcharge of certain portions of the blood: viz. the ſaline, acrimonious and putreſcent; and are therefore proper for ſcurvy, leproſy, dropſy, &c. but the gentle ones do more good than ſuch powerful ones as thoſe which, by violently forcing the urinary paſſages, inflame and exulcerate them, without acting upon the ſtone; wherefore it is that temperate, emollient, mucilaginous and balſamic li-

quors

quors are usually given, at the same time, to soften and relax stricture, defend against gritty concretions, and blunt such inflaming spiculæ as that of the saline of cantharides, which is one of our strongest diuretics; and, for that very reason, Dr. Mead prescribed the seflies themselves, to be taken internally, for the leprosy; in which disease they are said to be efficacious. They are not, however, to be given in doses above one or two grains; nor too often, lest they should cause strangury, or priapismus, which may happen to be succeeded by universal convulsions and death; for that has frequently been the effect of an ignorant, wanton, and lascivious abuse of these renovating stimulants.

The spring saponaceous vegetable juices have a power of dissolving stony concretions in the body. Those oxen which are killed in winter have, in general, stony concretions in the liver, lungs, bladder, or billiary duct; but those which are killed immediately after a spring-feeding on the spring juices have none.

Baron Van Sweiten says, "a copious and "long continued use of grass and dandelion, "succory,

" ſuccory, fumatory, and the like plants, have " generally been followed with plentiful eva- " cuation of ſtony or calculous fragments a- " mongſt the inteſtinal fœces; that is, of thoſe " generated in the biliary ducts."

Diuretics, merely as diuretics, are far leſs ſucceſsful in gravelly and calculous caſes, than we are generally apt to imagine; nay, ſome plants of the aſtrigent claſs are more efficacious

Dr James, in his Medicinal Dictionary, ſays, " he has obſerved conſiderable, ſingu- " lar, and ſurpriſing efficacy in decoction " of yarrow, if uſed a conſiderable time for " calculous diſorders. By the uſe of this " ſingle herb," ſays he, " I have obſerved " ſome patients entirely freed from nephri- " tic pains, to which they had been ſubject; " for it is proper, in caſes of this nature, " upon ſeveral accounts; ſince, beſides its " conſolidating and mitigating quality, it " abounds with a truly anodyne oil, which, " both in colour and virtue, reſembles that " of chamomile, and is highly efficacious " in allaying pain and ſpaſms."

Cheſneau, ex Zacut. lib. 2. prax. mirand. obſ. 66. ſays, " The uſe of water diſtilled from

" from the green leaves of tobacco, power-
" fully removes ſtones firmly lodged in the
" kidneys."

Paracelſus's ſovereign remedy for the ſtone, was the extract of ſafron.

Uva urſi, herb arſemart, the ſeed of common gromwell, pariera brava, flammula jovis, hyoſciamus, dandelion-root, and ſcrozonera, are ſome of the moſt powerful nephritic vegetables that I have yet experienced to effect looſe gravelly and ſlimy diſcharges. Moſt of the warm acrid plants, and thoſe of quick growth, reſolve concreted matter ariſing from certain portions of our fluids: ſo far they may be ſaid to be lithontriptic.

Phoſphorus, the moſt igneous ſubſtance obtainable from blood, urine, human ordure, or hot alkaleſcent plants, is ſaid to have no other ſenſible operation than to occaſion borborygmi and crepitus ventris; which ſhews, that it rarifies and repulſes the contained flatus. As there is great quantity of fixed air in the human calculous, its ſolution muſt depend upon the expanſion of that cementing principle. I have not yet heard

heard, that the power of phoſphorus has been ever tried for this purpoſe.

Helmont ſays, "putrified urine will diſ-"ſolve the ſtone, by taking up urinous tar-"tar after its own has depoſited." Fermenting mixtures made of the ſolution of the ſalt of tartar, or of wormwood and acid ſpirit, will cauſe air-bubbles to riſe from calculi, and diſſolve ſome part of them. The fixed-air avolates; but when the effervescence of the mixture is over, it has no effect on the calculus.

Profeſſor Cullen, in his Materia Medica, ſays, "Liquid ſhell, a combination of the "muriatic acid with a calcarious earth, I "have employed in nephritic caſes, with a "manifeſt alleviation of the ſymptoms."

Hoffman recommends, above all things, his own anodyne mineral liquor in nephritic complaints on account of its efficacy and ſoftneſs, when exhibited in ſmall but frequent doſes; which, he ſays, allays the ſpaſms of the primæ viæ, and wonderfully removes the uneaſy ſenſations, the nauſea and vomiting, they occaſion.—But this, I ſuppoſe, he never expected to do more with than merely to paliate, for it cannot cure.

Some

Some attempt to ſolve calculous concretions by alkalines; ſuch as by calcined ſhells of fiſhes, lime-water, oleum tartari per deliquium, potaſh, or ſalt of wormwood; which muſt be done upon the principle of deſtroying ſome acid and glutinous matter on which the concretions are very rationally ſuppoſed to form.

Zecchius, Trallian, and Carolus Piſo, recommend about a pint of warm water to be drank before dinner; affirming, that after the firſt ſtone is diſcharged, none can ever be formed again, if the uſe of warm water is perſiſted in.—Tepid water, no doubt, will ſubdue the caculous diatheſis in the blood: but drinking tepid-water to exceſs, or ſo much as to render it habitual, endangers debility, indigeſtion, lowneſs of ſpirits, hyſteria, &c.

As the lithiaſis is occaſioned by crudities, nothing can help the ſtomach to promote digeſtion and aſſimulation ſo much as water. But there is much difference in the qualities of water.

Thoſe ſprings which poſſeſs the property of diſſolving and clearing off that cruſt which almoſt all the common waters depoſite on our

our culinary veſſels, and which is particularly viſible on that common veſſel the tea-kettle, becauſe it is ſeldom cleaned, are of great ſervice in diſſol. ing the calculous diatheſis of the blood.

Mr. Stevenſon, aged 73, now living, as he has for many years, near the north gate of Buſhy Park, about ſixteen years ago, was attacked with the gout; which, he ſays, he neither had by hereditary right, nor by exceſſive or intemperate living, though he has always lived well. About ſix years ago, his gout changed its type to nephritic ſymptoms, which he attributes to having drank for ſome years a hard ſpring-water. Five years ago he left off the uſe of that, and drank the water which is conveyed in pipes under the river Thames to Hampton Court palace from Coombe-hill. He, at the ſame time, began to take Caſtile ſoap, (expreſſed oil and alkali, in the quantity of two drams a day) which he continued to do till about a year ago, when ſtones, or rather fragments of a ſtone, began to come from him by the urethra, to the number of three, four, five, or ſix in a day. They were thin and concave, as if they had been lamellated. Some were ſmooth,

ſmooth, and ſome rough on one ſide; but all had ragged edges, and conſequently were voided with conſiderable pain.

I lately went to examine theſe ſtones, and to enquire into the particular circumſtances of this caſe. The ſtones filled a large ſize tea-cup, and weighed eight penny-weights: the fragments weighed from three to eight grains. He told me they weighed much more on their coming away. The query is, whether theſe ſingle ſtones were formed each on its own nucleus, or are they fragments of a ſingle calculus? I confeſs that, from their form, and every other circumſtance I could collect, I am induced to be of opinion they are fragments of a ſingle calculus, and that the lithontriptic power of the Coombe water and the ſoap diſunited the concrete ſubſtance; and I am the more confirmed in this belief, becauſe no fur will adhere to the inſide of the culinary veſſels wherein Coombe water has been conſtantly uſed; nor have I heard of any one being ſubject to gravel or ſtone who conſtantly uſed that water.

For the laſt five years, his common drink has been Coombe water, with ſometimes a little rum or geneva. The latter, however, he was ſoon obliged to leave off, as it proved

a moſt painful forcer. We have many ſuch ſprings in this iſland as thoſe of Coombe-hill, which we ought to prize highly, for they are not only preventive, but curative.

Solvents make leſs impreſſion on ſmooth compact bodies than on thoſe which are rugged, light, and pervious. The calculus with aſperities is moſt troubleſome, and does moſt detriment to the ſenſible membranes.

As to lithontriptic or nephritic medicines, it would be a fortunate circumſtance indeed, for the human ſpecies, if an infallible ſpecific remedy was diſcovered which could be received by the ſtomach, and thence carry its active principle through the medium of the blood, without injury to its texture, and act on the calculous body with unabated force; or, if ſuch a medicine could at once be introduced into the urinary bladder, as, without injury to its coats, could there act on the formed calculus with ſuch force as to break it down into minute particles. There may be ſuch remedies; there probably are remedies for all diſorders. There was a time when even the ague and lues venerea were deemed incurable.

When the conſtitution has been much haraſſed by nephritic paroxyſms, the patient muſt

muſt endeavour to derive content from the temporary alleviation, and perſevere in preſcribed diet and regimen; for experience too fatally evinces, that even extirpation is far from being radical; nothing being compleatly ſo, that does not totally remove the primary efficient cauſe.

Moſes Waitt, Eſq. late of Ham-common, in Surry, in the year 1782, at the age of 72, underwent the operation of lithotomy twice within the ſpace of that year. Soon after the ſecond ſtone was extracted, a third was diſcovered; when, life becoming thus uncomfortable, he rejected all prophylactic means, and fell, as expected, within two years from the formation of the firſt ſtone. So far was his blood from being attenuated by phlebotomy, that it was always more ſizy—A circumſtance I mention to ſhow in what a ſhort time a ſtone will engender, when the blood is once vitiated by the calculous diatheſis, eſpecially in the aged. The firſt ſtone, if I am to judge by the indicating ſymptoms, formed in about three months. Mr. Pott having extracted the firſt ſtone, and Mr. Bromfield the ſecond, I can have no ſuſpicion that any fragments of either re-

mained to become a nucleus for the basis of a new formation.

Though, from the preternatural state of the blood, morbid affections are seen in the secreted fluids; yet the urine itself, in its natural state, has great sanative virtue.

A Gentlewoman of Kingston, turned of 40, whose constitution was much impaired by a constant gnawing pain at the pit of her stomach, bad digestion, great and irregular flow of the catamenia, difficult respiration, latent fever, sore breasts, frequent loud eructations, irregular appetite, interrupted sleeps, and incessant thirst, applied for my advice, after she had been thus afflicted for several years, and ineffectually attended by the Faculty. Soon after I had prescribed for her, she absented herself for about three weeks; but then returned, with an appearance of joy that seemed little less than frantic, to tell me, she was perfectly recovered by drinking a cupful of her own water once a day on an empty stomach; which she did *by advice of a neighbour*, who, by the same means, had been relieved of an habitual obstinate cholic of many years standing, and attended with several similar symptoms.

She

She ſaid it had operated gently by ſtool, and ſtrongly by urine; that it had increaſed her appetite, expelled wind, abated pain, and invited ſleep. Her countenance was clear and healthy.

Externally applied, it is detergent diſcutient, antiphlogiſtic and ſedative. It makes a moſt excellent collyrium for inflamed eyes; and Boerhaave made much uſe of it in fomentations and in clyſters.

CHAP. VII.

On Evacuation by Bile.

THE bile promotes the periſtaltic motion: that is, ſtimulates the fibræ motrices of the inteſtines to perform their animal functions. It renders the alimentary fluid homogeneal, and fit to paſs through the proceſs of animalization. The bile has many qualities, properties and virtues. Haller, in his Prima Linea, ſays, "Impedita a fluxu bilis ad inteſtina, deſtructa veſicula animalia robuſtiſſima interpaucos dies periſſe." Etmuller, and, indeed, many others, ſpeak of the great importance of this preſerving fluid; and, no doubt, if it is not allowed to paſs on uninterruptedly in its due courſe after it is ſecreted, life cannot long exiſt: but there are inſtances of patients recovering after there had been no ſecretion of bile for weeks, nay months.

In 1784, a Gentleman of Kingſton, between 20 and 30, had a ſuppreſſion of urine.

I was

I was called in on the third day. He had been copiouſly bled, and taken liquid laudanum in very large quantities. His blood was looſe, rarified, florid, and frothy, without any inflammatory buff or ropy cruſt; a ſtate the blood is always found to be in after having taken much opium.

I ordered a julep ex ſpirit. minderer. aq. puleg. ſpir. nitr. dulc. extract. cicut. ſyr. althæa, to be taken in doſes of two or three ſpoonfuls every quarter of an hour. This, with the aſſiſtance of the *ſemicupium* and *terebinthinate clyſters*, occaſioned him to void more than a pint of urine within the hour; and, in a few hours more, to empty his bladder, and drop into a profound ſleep; from which he awaked compoſed and eaſy, and continued ſo all the next day. The apprehenſions of his friends, however, induced them, in the mean time, unknown to me, and before the full effect of my mode of practice could poſſibly be ſeen, to ſend for another Phyſician, to, what is termed, aſſiſt. When he came, that Gentleman and the Apothecary thought proper to repeat the bleeding, and to reſume the laudanum. Within thirty hours after this, the patient's complaint

complaint changed to a remitting fever and tympanitis, or dry-dropsy.

The patient was now put on a course of deobstruent medicines (as calomel and rhubarb) which were persevered in day after day, and week after week, even though the symptoms increased, till singultus, thrush and flux, had almost overpowered him—It was then thought necessary to entreat that I would again resume my endeavours to relieve him from his extreme danger.

In compliment to the Profession, I now resolved to endure, as long as possible, the premature introduction of a Gentleman whose advice I, however, was determined should do no harm, and therefore forbade his dismission. But, so soon as I had relieved our patient of his most urgent symptoms, and as I knew he had been more than sufficiently evacuated, I ordered the Peruvian bark to be given during the remissions of the febrile paroxysms, to check the fever and putrid process, give tone and contractility to the muscular fibres, and density to the loose rarified blood. Still farther to help us, I availed myself of the opinions of Boerhaave and Boyle, who say, relief for the tympanitis

nitis is equally given by paracenteſis as in aſcitis. I alſo had ſeen Cheſelden's account of a cow having been ſaved by a puncture made in the belly, when ready to burſt by the expanſion of vapor. The operation was, I knew, at that ſtage of the complaint, very ſafe, and might have been an uſeful one: my opinions, however, were again overruled by the Phyſician and Apothecary.

Finding myſelf thus hampered and reſtrained from ſaving, as I thought, a valuable life, without ſo much as one ſingle reaſon being aſſigned for the oppoſition, I requeſted of the family that a third Phyſician of eminence ſhould be called in as umpire. This being immediately granted, he and I agreed *unâ vôce*, inſtead of perſiſting in the purging plan, to give him the red Peruvian bark, in frequent and large doſes, during the remiſſions of his fever, which then at once gave way; his immenſely diſtended belly ſubſided; a ſecretion of bile took place, after being upwards of ſeven weeks ſuppreſſed; and he perfectly recovered that good health he has enjoyed ever ſince.—That the patient ſecreted no bile, during his illneſs, was evident from the

the white colour of his intolerable fœtid ſtools.

About three years ago a ſervant maid at Kingſton, between thirty and forty, of a thin weakly habit, was attended by the ſame Apothecary till ſhe was obliged to leave her ſervice, and he, himſelf, urged her to ſeek relief in an hoſpital. The miſtreſs ſhe formerly ſerved, however, having been my patient, recommended her to my care. I found her exceeding weak, much oppreſſed in her breathing, her belly enormouſly expanded with tympanitis, and her monthly terms obſtructed. She had been copiouſly evacuated.—I purſued likewiſe with this patient the oppoſite method, and in ten days or a fortnight, ſhe returned again to her former miſtreſs's ſervice; where ſhe now is, and has been ever ſince.

Theſe two recent and well known facts, I relate for the purpoſe of aſcertaining two or three very material points.

Firſt, that though no bile is ſecreted, Nature may nevertheleſs exiſt for a much longer time than is generally ſuppoſed.

Secondly, that a tympanitis, though deemed more difficult to cure than a humid dropſy,

dropſy, is ſtill within the reach of art and judicious management; and that evacuants are not to be too much depended on, but are really deſtructive when much perſiſted in. Animal vapour eludes the operation of the moſt active purge. By weakening, it rather generates than diſpels vapour.

Thirdly, that if we ſubdue the leading ſymptom, the concomitant will yield; as was the caſe in theſe two inſtances.

When the ſecreted bile is obſtructed in its excretion into the inteſtines, the glands of the liver, biliary-ducts, gall-bladder, and aperture of the pores being thereby greatly diſtended, it paſſes through the lymphatic veſſels into the blood, and tinges the ſerum; that tinges the ſkin, nails, and tunica albuginea of the eyes; and is attended with all the ſymptoms of jaundice.

Calculi in the neck of the veſica-fellis, or gall-bladder, obſtruct the excretion of bile; but the ſtone does not form in that viſcus ſo very often as many Practitioners are apt to imagine. Similar ſymptoms will ariſe from other cauſes; ſuch as viſcidity of the bile, which obſtructs the biliary ducts; or, from ſpaſmodic conſtriction of the

the muſcular fibres of the duct, which will draw the ſtomach and whole abdominal viſcera into conſent, till a paralyſis enſues.

Bilious concretions are formed by a repletion of viſcid bile when at reſt in the gall-bladder. The weaker the patient, the more coheſive the bile from the attraction of the bilious ſalts.

Such ſaponaceous diet as honey and ſugar, as well as the attenuating juices of fumatory, ſuccory, vipergraſs, dandelion, goatſbeard, whey, tepid water, and the neutral ſalts, reſolve inflammatory concretions: the alkaline reſolve the glutinous. "Mercury itſelf," ſays Boerhaave, "does not fuſe the blood ſo powerfully as the oxymel ſimplex of Hippocrates, or the juice of fumatory in conſiderable quantities." Mellow white wine meliorates the preternatural acritude of the bile that is productive of gripes, colic, &c. Honey tempers and nouriſhes the bile. It is antiſeptic, for it will preſerve vegetables.

Hippocrates thought lymph and bile had a great ſhare in the generation of calculous matter. If they have, may we not reaſonably ſuppoſe they alſo contribute to the formation

formation of gouty calculi which they ſo much reſemble? Thoſe who are afflicted with this diſorder are much annoyed by lymph and bile.

The greateſt part of our knowledge of bile we owe to Van Helmont. Although this juice ſubdues acids, it is neither alkaline, fixed, nor volatile; but, by the oleaginous and ſulphureous corpuſcles diluted in its phlegm forming a balſam, it ſheaths, incides and protects the fluids.

Lymph and chyle are attenuated by volatile or fixed ſalts, pungent vegetables, ſaponaceous ſubſtances, warm air, or motion; and are coagulated by ardent ſpirit, ſpirit of vitriol, or cold air. Acidities in the primæ viæ render the bile inactive.

From an inordinate ſecretion and effuſion of bile, diarrhœa, cholera morbus, hepatic flux, &c. enſue.

Too great an evacuation of bile, either upward or downward, is prejudicial to chylification, conſequently to nutrition and ſecretion, from whence enſues the cold acid temperature, attended with paleneſs, weakneſs, ſwooning, &c. Hot climates and hot ſeaſons, have a remarkable effect in exalt-

ing and vitiating the bile. For reſtraining this, we are to temper, ſoften, obtund, refrigerate and ſtrengthen. If on a redundant effuſion of bile, it ſhould quickly accumulate after it has been medically evacuated, the primary inciting cauſe muſt be ſubdued, or the effect will not ceaſe.

From a defect in the ſecretion of bile, there is a defect in concoction or aſſimilation, and diſtribution: whence colic, ſpaſms, tympanitis, hypochondria, &c.

In order to ſupply a defect of bile upon an emergency, we muſt look for its moſt ſenſible quality; which is ſo bitter, that one drop of it communicates bitterneſs to half an ounce of water. Experiments ſhow that an acid, earthy, alkaline and ſulphureous commixture forms a bitter, and bitters have been conſidered as a ſubſidiary bile; but the vegetable bitter comes far ſhort of ſupplying its defect in the ſyſtem.

Bile is aperient, detergent, diſcutient, ſtimulant, antiſeptic, and ſedative. Boerhaave ſays, "the bile of animals, though but little uſed in medicine, is one of the moſt efficacious, if not abſolutely the beſt attenuant, of the animal fluids." He found

found a drop or grain of the extract of the gall of an eel a moſt powerful ſuccedaneum in defect of human bile, and particularly in diſſolving curdled milk on the ſtomach of ſucklings.—I have given an adult to the quantity of a dram without moving him more than twice.

Doctor Arbuthnot obſerves, that the milk on the ſtomach of calves, which is coagulated by the rennet, is again diſſolved and rendered fluid by the gall in the duodenum.

It would be endleſs to enumerate all the virtues aſcribed to bile, both by ancient and modern writers. I have frequently directed the uſe of it with bitter herb decoction in clyſters; and the umbilical region to be fomented with it, for diſlodging worms from the bowels. I have frequently cured the pruritus, or itch, by a liniment compoſed of bile, oil, ſulphur and nitre.

However, it is not bile or urine only, but every diſtinct and ſeparate part of an animal body, that ſerves, more or leſs, to make up the catalogue of the *materia medica*. The very viper, that poſſeſſes the moſt virulent animal poiſon, is not only an uſe-

ful, but an highly reſtorative diet and alexipharmac. Perhaps there is no better medicine for removing ſpecks or ſloughs on the eyes than *oleum viperinum*.

CHAP.

CHAP. VIII.

On Evacuation by the Catamenia.

THE catamenia are a monthly evacuation of mere blood from the uterus. They vary with the climate. In this iſland, they, for the moſt part, commence at fourteen or fifteen; ſeldom later than eighteen, or continue longer than fifty. If they come early, and are profuſe, they ceaſe early.

This is the only periodical evacuation of blood: all others are accidental, morbid or critical; though, by habit, they will ſo far eſtabliſh themſelves in the ſyſtem, that a precipitate ſtop would be attended with the utmoſt danger.—The quantity of blood thrown off at each menſtruration is from four to fifteen ounces.

About that critical period when the menſtrual diſcharge is taking its final leave, there is always ſome ſtruggle in every habit, and more eſpecially in thoſe who are ſan-

guineous, and who have been accuſtomed to copious menſtrual, naſal, or hœmorrhoidal diſcharges, or other increaſed excretions.—After that period, all the latent ſeeds of diſeaſes, eſpecially gout*, break out in the luxurious and inactive, whoſe blood and juices are depraved, and who neglect to prepare for ſuch attacks.

If the catamenia happen to return after the uſual final period, as they ſometimes do, they are occaſioned by ſome inciting cauſe; which, if not removed, will be fatal. Nature is more eaſily and more effectually aſſiſted before than after this morbid phenomenon appears.

It ſometimes happens that the catamenia will not flow by the vagina, but make choice of ſome other emunctory; as that of the mouth: however, if no untimely aſtringents are obtruded, no ill conſequence will happen: the error loci muſt be attended to, and the habit rectified, before the next expected return. I have had many of theſe caſes, but here ſhall only notice two of them.

A few

* Mulier non laborat podagri niſi menſes ipſe defecerunt. HIPPOCRATES.

A few years ago I was ſent for in the night to a Lady, of the ſanguineous habit, about thirty, who was diſcharging great quantities of blood from her mouth; which had much alarmed the Apothecary, who had been forty years in practice. Perceiving it was only the catamenia, I took my leave, by forbidding the uſe of medicine for two or three days; in which time, as I foreſaw, ſhe got well. I then ordered her body to be kept eaſy and ſoluble, by a doſe occaſionally of pilul. rufi; and two days before the ſucceeding viſitation, to take three doſes a day of ſaffron and flowers of ſulphur: (about eight or ten grains of each for a doſe:) which ſhe did. She has been perfectly regular ever ſince.

I was ſoon after ſent for to relieve another Lady between thirty and forty, whoſe catamenia had taken a ſimilar courſe by the mouth. The Apothecary, miſtaking it for an hœmoptyſis, had bled her copiouſly, and thrown in ſome reſtringent medicines; which, as naturally might be expected, had almoſt ſtifled her; inſomuch that it was with the utmoſt difficulty ſhe could reſpire. Her pulſe wavered, and was low, and ſhe had

had frequent deliquiums. I directed her to be cherished by white-wine whey, chicken-broth, &c. and, when faint, to take some cordial drops; as tincture of castor, spirit of lavender, &c. She recovered at that time, and became regular; but having been, for some time before this casual incident, in a declining hectical state, she died a few months after.

A flow of the menses, or other hœmorrhage, during the course of a putrid or malignant fever, even on critical days, terminates fatally.

As the catamenia flow from thousands every day in every month, the common idea of their depending upon, or being regulated by, the lunar changes, is evidently a vulgar error: and, as moderate bleeding immediately before their expected flow, neither retards their appearance, nor diminishes their quantity, but, on the contrary, causes them to flow more easily, and more abundantly, they therefore cannot be said to depend on a general plethora; and as those who are healthy, brisk, lively and active, not only perspire more, but also have a more copious menstrual flow than those who

who are weak, dull and infirm, it is evident that a want of perſpiration cannot be the cauſe of this ſtated local plethora.

Menſtruation, fœcundation and parturition, are ſome of thoſe ſecret operations of nature, which we cannot inveſtigate. The ſuſpenſion of the menſes, during the time of geſtation, and that of lactation, evidently ſhow, the intention of nature is to preſerve the blood until the maternal duties are performed.

The cachectical ſymptoms incidental to the ſex, from a morbid ſuppreſſion or inordinate profuſion, are many. The blood acquires new qualities, habitudes, poſitions, determinations and relations. Phthyſis, convulſions, hyſteria, mania, are not uncommon effects of a ſudden ſuppreſſion. A juſt idea therefore of the beſt means of reſtoring this natural diſcharge, or ſuppreſſing its exuberance, is of the utmoſt conſequence. The medicines and methods employed for effecting the firſt intention, are ſuppoſed to have a power of opening and expanding the extreme arterial veſſels of the uterus, and giving force and momentum to the blood.

To

To effect this, we must carefully attend to the age, productive causes, state and condition of the constitution: as no two habits are in all respects alike; therefore, almost every one, may require a different mode of treatment. Though we cannot speak here particularly to each individual's case, yet, we can speak decidedly to certain general characteristic signs; as, for example, if the patient be cold, lax, feeble, pale, and spiritless, that is to say, if she be chloretic, then, such tonics as steel, aromatics, bitters, cold air and the cold-bath, are necessary to strengthen the weak system of the uterus. Cold, to a certain degree, heateth: wherefore the cold-bath rather promotes than restrains hœmorrhages. Sea-bathing has wonderful effect in removing morbid suppressed menses, when occasioned by debility.

If there be heat, plenitude, density of the blood, rigidity of the vascular system, and the suppression obstinate, such potent deobstruents as aloes, mercury, the fœtid gums, castor, saffron, sulphur, and such other things as dispose to hœmorrhagy, together with bleeding in the arm or foot, and such

thin

thin diluting liquids, as will relax, attenuate, and expel the ſtimulus, and take off ſtricture of the blood-veſſels of the uterus are required. Tepid-baths and light air are cooling becauſe they relax and expand; wherefore, the attrition that cauſeth heat and compreſſion is proportionably leſs. The rare is cooler than the denſe fluid.

If a defect of the catamenia be from inanition, a more plentiful ſupply of nutritive juices, analeptics, and ſuch cordials as wine, ſhould be given to invigorate the organs of digeſtion, and enrich the blood.

If the ſuppreſſion be owing to a ſluggiſh viſcidity of the fluids, then attenuants, ſtimulants, volatiles, exerciſe, and particularly dancing, and temperate air, not only remove the obſtruction but ſubdue the cauſe.

If the ſuppreſſion proceeds from painful ſpaſmodic conſtriction of the uterus, a frequent conſequence of cold, emollient, gentle aperient and fœtid clyſters, ſudorifics, diuretics, pediluvium, ſemicupium, friction, electricity, ſitting over warm ſtimulating volatile ſteams, antiſpaſmodics, and mineral waters are indicated, to leſſen the vis reſiſtendi of the excretories. An injection

of

of the fume of tobacco, as mentioned in page 58; or the vapour of burning ſulphur in a chaffing diſh, are powerful catamenial promoters. Stimulating emenagogues, are only effectual at the near approach of menſtruation. Theſe I have often aſſiſted by the deobſtruent and ſedative draught*, which, in general, has given almoſt inſtant relief.

Diſquieting paſſions, or violent motions of the mind, diſturb the circulation of the animal fluids. The mind is to be ſoothed and quieted; but it is a difficult taſk to harmonize the mind before the cauſe of its diſquietude is removed.

An ineffectual uſe of emenagogues, however, is not to be obſtinately perſiſted in. I never knew a patient ſo far reſtored as to be perfectly regular, and enjoy full health, who had been morbidly obſtructed for ſix months: nor do I think it can be proper, after ſo long an obſtruction, to force the uterus. On ſuch

* ℞ Extract. cicutæ.
——— hyoſciami, a a gr. iij.
Aq. Puleg. ʒvi.
Tinct. croci ʒiij.
——— Caſtor. gutl. xxx.
Syr. roſar ſolutiv. ʒi m. f. hauſtus.

ſuch occaſions, I have generally enjoined my patients to pay a proper attention to the non-naturals; to the uſe of mineral waters, and to drink ſometimes the tea of ſuch ſimples as pennyroyal, white horehound, chamomile, feverfew, &c. The habit in general is to be attended to for preventing cachexy, which is much to be dreaded.

During the flow of the catamenia, but very few medicines are admiſſible. I have never ventured to preſcribe farther than ſome gentle aperient clyſter, leſt, by incommoding the ſtomach and ruffling the habit, the natural diſcharges ſhould be diverted from their proper courſe, which is eaſily done at this criſis.

Tho' moderate bleeding promotes the menſes, yet a very large ſpontaneous diſcharge of blood by the hœmorrhoidal veins, or noſe, ſuppreſſes or conſiderably diminiſhes them: copious venæſection, either before or on an undue return after the uſual period of their finally ceaſing, has a ſimilar effect in the plethoric habit.

A profuſio menſium, from a depravity of the menſtrual blood, and laxity of the uterus, is alſo attended with many inveterate

cachectical ſymptoms. When the impurity of the juices which have thus depraved the blood are corrected and carried off, aſtringents may then be uſed to brace up the lax tone of the vaſcular ſyſtem. Reſt and the dry diet muſt alſo be attended to. The ſame cautions are neceſſary for the cure of the fluor albus, a diſcharge of a chylous matter, ſeparated by means of the glandulous ſubſtance of the uterus. Women of tolerable ſtrong conſtitutions may endure this diſcharge a long time; though not without ſome inconvenience: but if it is incautiouſly ſuppreſſed before the antecedent inciting cauſe be removed, leucophlegmatia, dropſy, ill-diſpoſed ulcers, or other cachectical ſymptoms, will enſue.—Such acrid ſeroſity of the blood requires the correction of demulcents.

CHAP.

CHAP. IX.

On Evacuation by the Semen or Sperma.

THE Semen, or vivifying principle, ſecreted in the teſtes at the time of puberty, like the ſpeck of entity in the ſeed or pollen of the unembrionated plant, expands and unfolds the myſtery of its nature in the formation of the fœtus, whoſe birth is to preſerve both the mental and corporeal reſemblance of thoſe from whoſe ſemen its exiſtence is derived: that is, as nearly as is conſiſtent with the infinite variety of nature *. It, however, is not our preſent intention to ſay more on the ſubject of generation than merely to ſhow the importance of that ſpirituous balſamic part of the blood quod vitam impertit & partes confortat. The moderate venery of full grown, warm, and atheletic habits, by alleviating nature,

 preſerves

* ——Facies non omnibus una
Nec diverſa tamen—— Ovidius.

preſerves health. Semen, by long retention, loſes much of its ſtimulating active power; but an immoderate and too early uſe of venery, is irretrievably injurious: it weakens the nervous ſyſtem, leſſens innate heat, and conſequently the aſſimilating power and prolific faculty. If the blood, even in the ſtrongeſt conſtitution, is deprived of this nouriſhing, animating principle, the ſight and memory will be thereby impaired: and tremor, debility, relaxation, dejection, tabes-dorſalis, convulſions and apepſia will ſoon enſue: but, in the infirm and aged, it quickly extinguiſhes the lamp of life.

As temperate venery has ſalutary effects on the male, it muſt, cæteris paribus, have the ſame on the female: it prevents and cures thoſe chloretic ſymptoms which ariſe from a morbid ſuppreſſion of the menſes; and reſtores that natural diſcharge, by warming and invigorating the blood: but exceſs may bring on weakening ſymptoms; ſuch as glandular diſcharges, fluor albus, and the cachectic habit. If the uterus be much debilitated, an impotent reluctance to venereal enjoyment is thereby induced, and the power of conception and retention is loſt.—Fecundity

cundity depends as much upon the tonic power of the matrix, as upon the ſtrength and purity of the ſemen. Whatever nouriſhes and dulcifies the juices, not only improves and increaſes the ſemen, but alſo ſtrengthens and invigorates the matrix.

As blood is not generated ſo faſt after the meridian of life as in youth, native heat, the inſtrument of vital action, diminiſhes, and the ſpermatic veſſels cloſe for want of good and active blood to diſtend them. Venereal incitements are then leſs, for it is the copious ſecretion of the ſuccus genitalis that prompts to a diſcharge. The veſiculæ ſeminales becoming leſs turgid, there is leſs danger of a ſpermatic plethora, or inflammation, or ſwelling of the veſſels of the teſtes; or of an over-ſtraining of the nerves. I have, it is true, had patients, whoſe imaginations, even when far advanced beyond that meridian, were ſo much agitated by venereal dreams, as to occaſion involuntary nocturnal emiſſions: that, however, was not always produced by a plenitude of ſalutary juices in the veſſels; but oftener by ſome morbid inciting cauſe; which, by thus depriving the body of its animating powers,

enervated

enervated the ſyſtem, and rendered the balance between the ſolids and the fluids unequal. This morbid excitement was unnatural, and conſequently to be checked, by correcting the fault in the habit. If the cauſe is nothing more than mere debility and laxity, as it often is, a long continued uſe of chalybeate waters, and the cold-bath, will be uſeful.

Attention to the nature and effects of an exceſs of this excretion, whatever may be the cauſe, is no leſs neceſſary than that which is requiſite to the ſtillicidium virulentum from the glands of the urethra in men, or the vagina uteri in women, à coitu impuro.

The ſatyriaſis in men and furor uterinus in women, are affections that ariſe to a ſpecies of mania. Of the latter I have had ſeveral under my care: of the former but one in whom the characteriſtic ſigns were remarkably ſtrong. He was in his eighty-ſecond year and had been married to a woman above twenty years younger than himſelf, when he was ſeized with a hemiplegia, from which I recovered him; but he very ſoon after was effected with a ſatyriaſis, when his wife became a ſacrifice to that paſſion, which alſo killed him.

CHAP.

CHAP. X.

On Evacuation by Milk.

WHEN the tubuli lactei are diſtended with milk, it is abſolutely neceſſary to empty them ſo ſoon as poſſible, by natural or artificial ſuction: for the beſt milk will ſoon degenerate if it is ſuffered to ſtagnate; and inflammation, ſuppuration, or ſchirri, that terminates in cancer, will enſue.—But this is the proper province of the Surgeon and experienced Acoucheur.

CHAP. XI.

On Evacuation by Bleeding.

TOPICAL EVACUATIONS are contrivances to assist the vital principle which governs the stadium of heat in the blood for preserving its natural motions and due consistence. Evacuation, by phelebotomy, is neither elective nor disjunctive, but suddenly discharges the innoxious with he noxious principles. Vesicatories and issues draw off that which has seceded or is disposed to secede from the general mass.

The whole intention of bleeding is to diminish the redundance and restrain the impetus of the accelerated mass and stimulating power; by which, the inflammatory diathesis may be so far reduced, that refrigeration, separation, and attenuation may take place; a revulsion be made from a morbid part; and respiration, the pulse and vital actions, become regular, equal and free.

Bleeding

Bleeding is performed in imitation of the natural ſpontaneous excretion or eruption of blood from the noſe, hœmorrhoidal veins, anus, breaſts, or uterus, which prevents or critically terminates acute diſeaſes.

Bleeding is practiſed with moſt ſucceſs in cold climates, where the inflammatory diatheſis and acute diſeaſes prevail; but exceſs in every climate is to be avoided; for, by occaſioning an abatement of native heat, numbneſs, paralyſis, hyſteric affection, vertigo, blindneſs, tremor, debility, &c. may enſue. Immoderate ſpontaneous effuſions of blood, are ſucceeded by dangerous convulſions, delirium, and lypothymia, or ſudden failure of animal and vital actions.

A pauper—a coal-heaver in the ſervice of the late Mr. Henry Roſe, of Kingſton, was lately brought to me by two others, who ſupported him on his feeble legs, and told me that the poor creature had been bled ten times in a few days by the Apothecary, who was now diſpleaſed with him for not ſubmitting tamely to the lancet the eleventh time. This was for a cutaneous complaint, in which the lancet ought not to have been uſed at all. But it is not my intention to comment

comment here on ſuch practice; it needs none. I ſhall only ſay, that, by the very oppoſite method, he was recovered. By living on a generous diet, increaſing that gradually, and daily drinking a few glaſſes of port after dinner, his impoveriſhed blood was enriched and increaſed, and his enfeebled ſolids filled and ſtrengthened.

Since the powers of life are ſooner diminiſhed by bleeding than by any other evacuation, it is evident that no ſuch evacuation ſhould ever be made but when it is indiſpenſably neceſſary. It ſhould be moſt cautiouſly conſidered, that blood, and what Hypocrates calls animal ſpirits, were originally united by nature to flow in one ſtream together; and therefore, that, if much blood is taken away, much of the vital principle muſt be loſt with it: the remainder will conſequently be weak and incapable of giving tincture to the new-formed chyle. The blood is *cuſtos vitæ*. In ſcriptural language, it is "the ſeat, the chamber and magazine of life.——The vital ſtrength rideth in the chariot of the blood." The doctrine of that great Pythagorean philoſopher,

loſopher, Empedocles, placed the exiſtence of the ſoul in the blood.

The rational Proficient is ever ſparing of this moſt precious fluid; whereby he is the moſt ſucceſsful in effecting firm and laſting cures, eſpecially in his attendance upon infancy and age. The great error of taking away blood, almoſt in any quantity, from the aged and gouty, or aged ſcorbutic patient, or from thoſe of weak nerves, can never be compenſated. But, however much I may decry exceſſive and indiſcriminate bleeding, I would not be underſtood to unite with Eraſiſtratus, Helmont, Paracelſus, and their followers, who totally condemn the practice of bleeding on any occaſion whatever; for we every day ſee that where a ſedentary life, and high living, or a ſuſpenſion of ſome accuſtomed evacuation, has occaſioned a redundance of blood, which is apt to bring on ſcurvies, infarctions of ſome of the viſcera, lethargic, or apoplectic diſorders; or where there is an aſthmatic difficulty of breathing that threatens ſuffocation; while ſufficient ſtrength and energy remains, a ſmall or moderate quantity of blood, when drawn off with a prophylactic

phylactic intention, may assist and give relief even to the most aged. In the prime of life, if the patient is strong, plethoric, his disease acute, with high and quick vibrating pulse, incessant thirst, tight-bound cough, and in danger of hœmorrhage, the propriety of bleeding, and even repeating it, is obvious to the meanest capacity; but where the pulse is soft and rather languid, the heat moderate, though attended with the usual symptomatic cough, as in measles or influenza, the lancet is wisely with-held, or but sparingly used.—Enough of fever is always to be left to conquer the morbific cause. Bleeding is far from being, on all occasions, a necessary prelude to the treatment of a disease, In shunning the Scylla of fever, we must not run upon the Charybdis of palsy, dropsy, or convulsions. Bleeding on the attack of some palsies would confirm the complaint. By increasing the fever till it terminated in a profuse sweat, I have had the pleasure of seeing several of my paralytic patients restored to perfect health. A supervening fever is often the happy termination of many lurking complaints.

A palsy

A palsy does not so often happen from plenitude of blood, as from loss of its quantity, impurity of its serum, and a disturbance of the mind. When it is occasioned by a redundance, evacuation is then not only needful but must be immediate.

Howsoever necessary bleeding is in pleurisy and peripneumony in the first stage of these complaints, yet if it be too copious it will hinder expectoration and discussion of the inflammatory matter, and lay a foundation for catarrh, annual coughs, and deposition of serum and lymph on the lax glandular organs.

If there should be a plethora in the sanguineous constitution during pregnancy, the drawing off a small quantity of blood, in the second or third month, will contribute to preserve the health of both mother and fœtus. But abortion, and all the dreadful consequences attending it, may be occasioned by unseasonable bleeding and purging.—As the blood, during pregnancy, has a tendency to the inflammatory diathesis, opium, which, I am afraid, is too frequently used by the unskilful in many other cases as well as this, can never be employed

to advantage: for, inſtead of giving tone and ſtrength, it relaxes, and thereby encreaſes hœmorrhage, and weakens the action of the moving fibres.

In the ſpring ſeaſon when there is an orgaſm of all nature, and every thing in animal and vegetable evolves, opens and expands, hœmorrhages enſue, that reſemble a redundance of blood. But it muſt be obſerved, that, though bleeding may be abſolutely neceſſary in ſome vernal acute diſeaſes, yet, the frequent repetition of it increaſes plethora, and induces cacochimy. The pulſe, which in general is the Phyſician's beſt guide for the uſe of the lancet, is not always to be depended upon in ſpring.—When there is plenitude of blood, the pulſe, inſtead of being raiſed, is depreſſed. Nor is its appearance always a true indicator for the uſe of the lancet: ſeveral other circumſtances, beſides the morbid cauſe, may influence its phenomena; ſuch as the ſize of the orifice; the ſize and form of the receiver; the temperature of the weather; and the time taken in drawing it off. Profeſſor Cullen, in his Materia Medica, ſays, " a ligature kept on a veſſel for

ſometime

ſometime will produce that inflammatory cruſt, which has always been conſidered as a morbid ſtate of the blood."—In plenitude, the pulſe riſes on venæſection, and reſpiration becomes free.

As it is the quality, not the quantity of blood, that is the cauſe of chronic, malignant and putrid diſeaſes, the lancet can ſeldom be uſeful in their cure; for, as the ingenious Dr. Shebbeare ſays, in his Practice of Phyſic, "whatever leſſens the attracting power of heat, expedites the danger, and bleeding manifeſtly effects that."—In this inſtance, I think it is much ſafer to depend on Diemerbroek, than on Sydenham or the ancients. Thoſe who proteſt againſt bleeding in the plague, and ſay it is not only dangerous, but deadly, muſt, in my opinion, be right.

The preſent faſhionable mode of preventing exanthematous, or puſtulary eruptions; ſuch as the varioloſe and morbilloſe, from riſing to a degree of putridity, by the antiphlogiſtic aperient plan, may be ſafely practiſed in the preparative or early ſtage; but not ſo when nature is buſily employed in the work of excretion; or in the exacerba-

tion of fever. A ſudden retroceſſion of the eruptions, even at the height, is attended with ſtruggle and ſometimes with danger.

As the veins are impatient of vacuity, they invite humours promiſcuouſly from every part, even the ſeparated morbific matter, from the ſuperficies of the ſkin, to fill up the place of the emitted blood. On this principle, bleeding, in the putrid malignant fever, generally ſpeaking, is unwarranted; yet there is no rule without exception: a ſymptom or circumſtance may appear to render the loſs of a ſmall quantity neceſſary, as was the caſe in the ſynochus putris that prevailed in the years 1772 and 1773, when the drawing off two or three ounces in the beginning, was very uſeful for mitigating an inflammatory ſymptom that terminated in ulceration of the throat; but, even in that inſtance, the rational Practitioner was guided by other ſymptoms and circumſtances.

In the gout, phlebotomy, by weakening the ætherial animating principle that preſerves and purifies the blood, renders the diſorder more irregular and more inveterate; and invites ſuch other diſorders as

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the dropsy, jaundice, palsy, hypochondria, &c. to take place. Nevertheless, though general bleedings are inadmissible, yet topical bleedings, by leeches, for such local affections, as gonagra or chiragra, have relieved.

It is not sufficient to attend only to the nature, quantity, and quality of the blood; it likewise is of great consequence to determine on the manner that is most proper for drawing it off. Dr. Boerhaave says, "three ounces of blood discharged, in full stream, affords more relief than ten distilled in drops." The blood discharged suddenly by full stream in the strong and plethoric habit, no doubt, is best; but where the patient is delicate and weak, and liable to swoon, I prefer the small orifice. A violent hœmorrhage, in general, occasions fainting. Where the hœmorrhage is slow there is no disposition to swoon; the vessels gradually collapse and continue constantly full: there is no suspension of the circulation; nor is the sudden effects of inanition felt. The posture the patient's body is in during the operation, is also a consideration of moment. Professor Cullen, in his Prac-

tice of Phyſic, ſays, "a ſmall quantity of blood drawn in the recumbent poſture, has more effect than a much greater quantity in the erect." If this poſition of the body occaſions leſs reſiſtance to the weight of the blood propelled from the heart through the ſuperior ramifications of the aorta, or the attraction of gravitation has leſs power at ſuch time over the motion of the animal fluids, the patient muſt conſequently be relieved from the preſſure that would occaſion a ſyncope or fainting.

For local inflammatory affections, different methods have been deviſed for this evacuation. For an immediate relief of the membranes of the cranium and brain, blood is generally taken from the jugular-vein: but if it is taken from the veins of the limbs, a greater quantity is required to be drawn off before the head can be relieved.

Upon the principle of revulſion, the vena ſaphena in the foot is opened, and ſometimes it has the happy effect of relieving ſuppreſſed menſes, head-ach, tooth-ach, &c.

Arteriotomy, for ſimilar affections of the head, is ſometimes performed on the temporal artery; and is more effectual than venæſection.

næſection. It would be much oftner practiſed, if it was not generally apprehended that there is always ſome danger of too great an effuſion of blood, or of the formation of an aneuriſm: but arteriotomy may be performed with great ſafety, on the forehead or temples, and has the ſuffrage of the greateſt Phyſicians and Surgeons, both ancient and modern, to recommend it. Indeed it was a common operation among the Ægyptians, who performed it as frequent as they did venæſection, from a very high opnion they had of its relieving the ſuperior parts of plethora.

Cupping, with ſcarification on the head, neck and ſhoulders, is ſerviceable in opthalmia, vertigo, cephalalgia, mania, epilepſia, apoplexia and convulſions. To reſtrain a profuſion of the menſes, Hippocrates recommends a large cupping-glaſs to be placed under the breaſt; and, for a quinſy, a large cupping-glaſs under the chin, and opening the ranula vein under the tongue. Themiſon's ſect applied cupping-glaſſes immdiately after leeches, to draw off more blood than the leeches could ſuck. Cupping-glaſſes not only draw off blood, but, with

with it, the local venom of animals and insects: and relieve a corrupted or gangrened part after a wound or inflammation. They relieve efflorescences, or defedations of the face, from a hot constitution, by deriving the blood from the part, and consequently the heat, and allowing a due motion, that preservative of the fluids against stagnation and putrefaction.

For prolapsus uteri, Boyle speaks highly of the utility of a large cupping-glass applied to the naval; but not to stay on above a quarter of an hour, lest it injure the part.

When a patient cannot safely sustain the loss of any blood, cupping is used without scarification.

The practice of cupping was much in use amongst the Ægyptians. From its effects it may be said to be the restorer of defective life and nutrition.

For such affections, as opthalmia, suppressed hœmorrhoides, rheumatic tumefactions, or inflamed swellings of the limbs, and nephritic, phrenitic, hypochondriac, melancholic and ischiadic pains, leeches on or near to the part affected give relief: they also

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are more convenient than the lancet for infants, whoſe veins are not conſpicuous; but the diſcharge by them may be exceſſive, as they are apt to ſtrike an artery, unleſs a Surgeon is preſent to direct where they may fix without danger, and, if needful, to ſtop the bleeding. Hoffman ſays, "I have ſeen "malignant ulcers and fiſtulas produced "by leeches applied to the blind piles."—Much depends upon the ſtate of the habit.

Themiſon is ſaid to have been the firſt Phyſician who uſed leeches. Hippocrates does not mention them.

The practice of phlebotomy, according to Pliny, was originally taken from the hippopotamos, which, when full of blood, ſtrikes his leg againſt ſome ſharp point, and thus relieves himſelf by bleeding.

CHAP.

CHAP. XII.

On Evacuation by Bliſtering.

THE moſt common veſicatory is cantharides. The heat of the body gives motion to the volatile active part of theſe flies, which, being abſorbed, attenuates, relaxes and ſtimulates ſo ſtrong an action of the nerves of the cutis vera as to produce a true inflammation. The great afflux of humours to the ſtimulated part, ruptures the veſſels which connect the cuticle and true ſkin, and extravaſates between them a conſiderable quantity of ſerous fluid, forming, at firſt, a number of veſiculæ, which afterwards unite. Part of the morbid ſerum is thus attracted to the ſuperficies, the torbid ſolids are excited to more frequent oſcillations, and energy is conveyed to the whole nervous ſyſtem. By thus reſtoring the circulation, relief is given to the vital powers; the ſecretions are promoted, and the morbid parts rendered leſs ſenſible to the ſtimulating cauſe:

cauſe: for, as the ſentient principle is diverted to the newly inflamed part, a derivation is thereby obtained; the obſtructions are removed; pain is abated, and preternatural tenſion and ſpaſm taken off. Thus bliſters are ſtimulant, evacuant, derivative, ſedative, and antiſpaſmodic.

1. As ſtimulants to the living ſolids, they are very efficacious; but if their power did not extend beyond that, they would do harm in a fever, which is an increaſed action of the heart and arteries. Head-ach has not only been cured by ſtimulating bliſters, but by æther, when the ſeat of pain appeared to be external; though indeed, there are but few head-achs that do not affect the internal membrane.

2. As evacuants, their virtue and efficacy go beyond the quantity of matter they diſcharge; for much greater diſcharges than ſuch as can poſſibly be made by them, are promoted by other cauſes, tho' without ſuch relief, as the bliſter will give to a morbid habit. We have frequent inſtances of bliſters curing preternatural diſcharges; ſuch as purging, hœmorrhages, &c.—Women who, after delivery, have inteſtinal flux, attended

tended with pain in different parts of the body, and ſwellings of the lower extremities, are ſpeedily relieved by a bliſter on the moſt painful part.

3. As derivatives, when nature is endeavouring to depoſite matter critically on a remote part, a veſicatory on that part will haſten the derivation thereto.

Diemerbroek, in his Treatiſe on the Peſtilence, ſays, "he applied a bliſter a little "below the place where a bubo was form-"ing; that, he thereby excited a flow of "the depraved blood and juices to the part, "and thus promoted a ſpeedy diſcharge of "the contagious matter." In ſluggiſh lethargic diſpoſitions, with a thick ropy blood; or in catarrh, with a redundance of ſerous acrimonious fluids upon a particular part; or in rheumatiſm, in which there is an acrid collection in any part, bliſters are very ſerviceable.—In fits of humid aſthma, when applied between the ſhoulders, they relieve the ſtraitneſs of the bronchia and blood-veſſels, by drawing off the ſtimulating cauſe, and thereby allowing the veſſels to regain their natural expanding and contracting

power.

power, and the fluids to become more equal and uniform for circulation.

4. They are ſedative and antiſpaſmodic, by ſubduing ſpaſm or painful rigid conſtriction. Nothing more effectually relieves the gouty ſpaſm in the ſtomach, when it is applied to the ſide, or inſide of the arms, legs or thighs; but not on the ſtomach itſelf, as the intention is to make a revulſion from the ſeat of pain. Bliſters, and warmth, alleviate the excruciating pain of the rheumatiſm, tooth-ach, jaw-ach, ſciatica, anomalous gout, &c.

Much depends not only on the nature of the diſeaſe, but on the ſtage of it when the bliſters are applied. After the previous evacuations, they are moſt remarkably beneficial for a continued fever in that ſtage when bleeding is unſafe. In the low nervous fever, I have ſucceeded, in the beginning, by bliſters and rheniſh wine only.

In petechial fevers, veſicatories muſt not be applied too early; for by leſſening the quantity of the ſeroſity of the blood and lymph, the eruption of the puſtules is prevented. They are eſſentially ſerviceable on the turn of the diſeaſe; to prevent the peccant matter from returning on the blood,

and a ſudden ceſſation of the ſwellings of the hands and face, as in the ſmall-pox.

Bliſters are alſo ſerviceable in local inflammatory diſeaſes (ſuch as pluriſy, peripneumony, or inflammation of the lungs) that ſeem to require bleeding. Heiſter relieved opthalmia, or inflamed eyes, by a ſmall bliſter on the crown of the head. Farriers apply a bliſter to a ſprained part of a horſe, and ſay it cures. Hoffman ſays, bliſters often prevent an approaching fit of the ague. Veſicatories on the inſide of hydropical ſwelled legs, promote a great diſcharge of ſeroſity, but a gangrene is in general the conſequence.

In ardent fever, when the ſpirits are violently moved by a febrile inflammatory blood, the mouth parched, the tongue burnt, the patient reſtleſs, wakeful and delirious, with a leaping of the tendons, and the ſkin hot and dry, the ſtimulus of cantharides would increaſe the ſymptoms, and prevent, that natural compoſer of the brain, ſleep; during which the blood moſt effectually ſeparates its impurities, and the brain recovers its waſte of ſpirits.

Although

Although blisters attenuate and reduce the inflammatory, they do not increase the putrid, diathesis of the blood; as appears by the writings of some of our most sagacious observers; such as Whytt, Huxham, Lind, Fothergill, &c. They are found to have great good effect even in that most malignant of all febrile diseases, the plague.

Mercurialis introduced blisters among the cures of the plague, and Saxonia confirmed his practice: but Aretæus was the first who used them in epilepsy, gout, lethargy, apoplexy, foul eruptions on the skin, and some other chronic disorders.

When a blister is intended to give stimulus only, it is removed so soon as the part becomes rubified; and is renewed alternately utcunque opus sit. Sinapisms, however, are most commonly employed for this purpose; and, when applied to the soles of the feet in affections of the brain, as in coma in fever, or in stupor, termed anæsthesia, where the palpitation of the heart and arteries is weak, they have good effect.

As cantharides are apt to inflame and exulcerate the urinary organs, the sinapism is preferable for a long continued stimulus.

Sinapiſms, by inviting a greater flow of blood to the ſurface of the body, are called rubificants; but, as their power may be extended ſo far as even to bliſter and diſcharge a ſerous fluid, I hope I may be allowed to arrange them among evacuants. When applied early to the fauces externally, they are effectual in quinzy.

CHAP.

CHAP. XIII.

On Evacuation by Fontanels or Iſſues.

THESE artificial ulcers are of vaſt importance for preſerving from, mitigating, and removing, a variety of bodily infirmities; ſuch as gout, rheumatiſm, leproſy, foul defedations of the ſkin, head-ach, vertigo, lethargy, epilepſy, hœmoptyſis, phthiſis-pulmonalis, palſy, catarrh, hydrocephalus, hyſteria, hypochondria and melancholia. They often cure tooth-ach, ſore eyes, ſore breaſts and old ſtanding ulcers; and, by cleanſing the habit of foul inciting particles that induce a preternatural flow of the catamenia, they are very ſerviceable in cacochymies or bad habit of body about that period when the menſtrua finally ceaſe. Iſſues not only prevent, but cure. A cold will fly off at an iſſue: that is to ſay, thoſe inciting particles will paſs off which would cauſe a phlogoſis, or inflammatory diſpoſition. A fever may poſſibly ſuppreſs the diſcharge

which was designed to prevent it; but, when the fever is subdued, the issue will again run and carry off the relicts. Quercetan the Armenian, in his Alexiacus Pestis, says, "the "medical man, whose office it is to attend "on the sick, admirably preserves himself "by an issue." Hoffman honours issues with the title of egregia prophylactica; and Diemerbroek, of præstantissima subsidia. It is said an issue is a preservative against infection of the plague*. When pestilent buboes and carbuncles inflame, maturate, and discharge a laudable matter, the fever abates, and the morbific matter deposites and passes off.

Ætius, for the bite of a mad-dog, recommends the ulcers to be kept open for the space of fifty or sixty days; that is, till the virus is spent: and, Dr. Boerhaave, in imitation, recommends a continual suppuration to be kept up in the part for six months. Celsus, by cupping, and then applying the actual

* Et cum fontanellæ etiam excrementitios humores sensim è corpore tollant, atque hinc apparatum ad pestem suscipiendam demant, et eæ tempori pestis utiles sunt.
SENNERTUS, lib. iv. cap. v.

actual cautery to the wound, ſuppoſed the poiſon might be extracted.

In the days of Hippocrates and of Celſus, they opened iſſues by cautery for dropſy, arthritis vaga, or flying gout, labriſulcio or tumified lips, epilepſy, conſumption, &c. It was a practice formerly at Montpelier, at Padua and in Tuſcany, for epilepſy, to cut not only through the integuments of the cranium, but to make an opening by the actual cautery through the future of the ſkull itſelf, for the malignant fume to fly off from the brain, and by that means prevent a return of the fit; but I only mention this to ſhow, that, however crude the opinions of the ancients were in reſpect to the operation, their ideas of the utility of iſſues were always correct.

The ſeton was ſucceſsfully introduced by Columella, during the plague in the reign of Claudius, until which time the cautery had been uſed in the cure of that diſeaſe. It was ſoon after extended to the epidemic and malignant diſeaſes of horned cattle, and attended alſo in them with ſucceſs.

If there is plenitude or redundance of humours, occaſioned by diet, abſorption of humidity,

humidity, confinement, or whatever diſpoſes the fluids to depravity; an iſſue or fontanel is highly beneficial.—The ſeton termed *a rowel*, has long been uſed by farriers whenever a repletion, or a coacervation of humours, required a drain.

The practice of making iſſues is very ancient: Galen, Forreſtus, Ambroſæus Paræus, Glandorpius, Mercurialis, Platerus, Angelus Sala, Rammazzini, Fracaſtorius, and others of the ancients, teſtify their utility in phthiſis, ſcrophula, lepra, lues-venerea, ſcurvy, epilepſy, rickets, cataract, dimneſs, gout, and other affections, ſive anticipiendo, ſive curando; and aſſert, thoſe who have either ſpontaneous or artificial ulcers are ſcarce ever known to die of the plague.

The moderns, ſuch as Hildanus and Baglivi, ſpeak highly of the excellence of ſetons in catarrh, phthiſis, hœmoptyſis, &c.

Dr. Willis ſays, "he cured one patient "of an obſtinate weakneſs in the loins, and "another of an inveterate ſciatica, by an iſ- "ſue in the groin."

Dr. Sydenham ſays, "the remains of "the morbific matter of a rheumatiſm may "be

" be eaſily carried off by an iſſue in one of " the legs."

Dr. Morton, ſpeaking of iſſues in an original pulmonary conſumption, ſays, " Iſſues " in the arms, or between the ſhoulders, " are ſerviceable for abating the quantity of " the ſerous liquor of the blood, and con- " ſequently for comforting the brain and " nerves, and tempering the animal ſpirits, " which doubtleſs contribute very much to " the extinguiſhing of the hectical flame, " and to the prevention of a conſump- " tion."

Dr. Nicholas Robinſon ſays, " when the " lungs were oppreſſed with a ropy tough " phlegm, or matter, that lies deep and re- " quires great labour in pumping up, I ad- " viſed a couple of iſſues, or ſetons, to be " made in the arms, or in each ſide of the " breaſt; or between the ſhoulders juſt be- " low the nape of the neck; and it is im- " poſſible to conceive the benefit I have " known to accrue from theſe iſſues, eſpeci- " ally when they made a free diſcharge."

Baron Van Sweiten and Ruyſch declare that nothing, in their practice, ſucceeded better than iſſues.

Sir

Sir John Pringle ſays, "I can freely re-
"commend, from repeated trials, the uſe of
"ſetons or iſſues on the ſide of the part that
"is moſt affected."

I imagine it to be of little conſequence where an iſſue is fixed, provided it be in a convenient and ſafe place.

Some children, who have not ſufficiently purged off the ſmall-pox, are afterwards tortured with boils and running ſores; for which I have experienced nothing ſo effectual as iſſues, ſea-bathing, and ſometimes intermediately drinking ſea-water.

As I have ſeldom had occaſion to preſcribe a doſe of phyſic for a perſon who happened to have an iſſue, even though frequently conſtipated before, I am led to believe an iſſue is efficacious in obviating habitual coſtiveneſs. The ſtimulating purge is only temporary, and does not radically, or effectually, remove the cauſe: an iſſue removes not only the cauſe of conſtipation, but alſo that of laxation.

There probably is nothing more difficult in phyſic than to find a remedy for habitual conſtipation, and bring the animal functions to perform their office regularly. If the conſtipated

conſtipated habit is occaſioned by a weakened tone of the inteſtines, Pyrmont, Tunbridge or other chalybeate waters, if drank daily for ſome weeks, will be very efficacious; but if the cauſe of the conſtipation is a defect in ſecretion, or a hot temperament of the blood and depending juices, refrigerating alterants and an iſſue will be neceſſary. From theſe I have repeatedly ſeen very happy effects.

By many Practitioners, the potential cautery or cauſtic is, at this time, preferred to every other method of opening an iſſue. This, however, depends on the part where the iſſue is to be fixed, and the quantity of matter that it may be neceſſary to diſcharge.

The idea of an iſſue is apt to terrify and diſguſt; but, when properly managed, it is neither painful to the moſt tender, nor offenſive to the moſt delicate: if, however, the pea, or cord, or acrid matter, ſhould happen to itch or irritate and inflame the part, the pain ought to be patiently endured, as the ſtimulus is a ſalutary one, and promotes the diſcharge.

Some

Some gentlemen are afraid of recommending iſſues, leſt they ſhould weaken the patient; but my experience warrants me in ſaying, that, on the contrary, they ſtrengthen, by drawing off that which keeps the body weak. In the courſe of a long, and, I may ſay, a ſucceſsful practice, I have preſcribed iſſues to all ages, from childhood to threeſcore and upward, but never could diſcover they had any ill effect. Indeed, I remember once having a patient whoſe blood was ſo much impoveriſhed by neceſſitous poor low diet, that I found it indiſpenſible to cloſe the iſſue rather haſtily; but after ſhe had been comforted with a more generous and plentiful diet for ſome months, the iſſue was renewed with advantage.

The fontanel relieves the genus nervoſum, evacuates morbid ſerum, leſſens repletion, tempers the maſs of blood, and promotes digeſtion, concoction, nutrition, ſecretion, and excretion. It alſo clears the ſkin of foul defedations, and brightens the complexion.

But, however beneficial iſſues may be, poſt conceptionem, and during pregnancy, in preventing miſcarriage by relieving the habit,

habit of that which occaſions weakneſs; yet, while the power of conception is retained, I think they ſhould never be preſcribed for a married woman: for, from ſome inſtances, in which I had many reaſons to conclude they defeated the intention of nature, I have been long deterred from preſcribing them under ſuch circumſtances.

Miſcarriages, in general, are occaſioned by frights. In weak, delicate and irritable habits, they are often ſo violent as not only to bring on deliquium, but convulſions, and the moſt alarming ſymptoms, if not death. If a flooding comes on, aſtringents have no effect on the uterus, till the fœtus and ſecundines are expelled, when they immediately become unneceſſary, becauſe the hœmorrhage ſtops ſpontaneouſly. Gentle exerciſe, plain diet, tonic ſtrengtheners and tranquillity, are neceſſary to prevent a miſcarriage.

The danger of precipitately drying up an iſſue, by which nature has been invited and habituated to throw off the noxious humours that offended her, may be no leſs fatal in its conſequence than a ſudden ob-

ſtruction to any diſcharge by her own efforts: for, in either caſe, the matter, which is morbid, would fall back upon the habit: but no ſuch effect enſues from it drying up of itſelf, without neglect, and after it has for ſome time diſcharged a laudable matter; for the habit is then as ſecure as if the indiſpoſition had terminated by a ſpontaneous critical abſceſs, which the fontanel, or iſſue, was originally deſigned to imitate. It however may, now and then, be neceſſary to take a gentle doſe of phyſic, till the body is perfectly regular in her motions, and the determination is led off from the artificial channel.

The common iſſue that is preſerved by a pea is the eaſieſt; and, as its effects are ſimilar to others, it therefore is moſt generally uſed, and is particularly well adapted for children. Iſſues made by the actual or potential cautery, produce happy effects, where the great and ſudden diſcharge is required.

Moxa, or Indian moſs, the boaſt of China and Japan, as a ſpecific for gout, epilepſy, colic, head-ach, tooth-ach, madneſs, &c. is a ſoft, woolly, cauſtic herb, a ſpecies of mugwort, which they prepare and

and lay on the part affected, where it is suffered to burn for a few minutes, but not through the skin; to effect which, it is lighted successively till the heat has destroyed the force of the morbific matter; as the actual cautery is said to cure the bite of the viper, or mad-dog, by destroying the texture of the part; and, if any should still remain, by allowing that virus to run off by the sore. A warm cabbage-leaf or coltsfoot-leaf is then laid on the eschar, which falls off the next day, when there appears a thick matter like pus or lard. The part is afterwards, by this means, kept open, to allow a discharge from the habit to purify the blood.

If the issue by moxa is really capable of accomplishing the cure of those great and stubborn disorders, I apprehend it must be effected when it is used at an early stage; for, though an issue may prove serviceable in an advanced stage of a chronic disease, by lessening its force, and enabling the stomach and the chylopoëtic organs to perform their functions more regularly, yet the great and permanent cure cannot be expected from it unless the issue is made before the disease

has firmly rivetted itſelf in the vital principles of the conſtitution.

Two of my patients, between forty and fifty, before they had iſſues, were long and ſeverely afflicted by the gout. They have had them almoſt ſeven years, and received ſo much benefit as to imagine themſelves cured.

A Gentleman, between ſixty and ſeventy, of a full corpulent habit, who happened to have two or three ſlight apoplectic ſtrokes, had an iſſue, or rather two large ones, made between the ſhoulders, by the advice of his Phyſician, and he has lived ten years ſince in excellent health. He was firſt plentifully evacuated. The iſſue, by evacuating gradually, allows the relaxed veſſels of the brain, after great diſtenſion, to recover their priſtine tone.

A young man of a full phlegmatic habit, with ſeveral exulcerations on his body, having been infected by the pruritus, or itch, was adviſed to attempt his own cure by an unction of brimſtone and butter. On the very firſt uſe of this ointment the itch went off, the ſharp ichor and ſores dried up, and epilepſy enſued. He then fled to London

for

for advice. After he had been bliſtered, and taken valerian, caſtor, and volatile ſalts, without receiving relief, he applied to an eminent Phyſician, now living, who judiciouſly ordered ſome blood to be taken from him, a cooling doſe of phyſic every third day, for three or four times, and an iſſue or ſeton to be fixed in his neck. The iſſue diſcharged freely: and he very ſoon recovered a perfect good ſtate of health.

It has often been attempted to cure the itch by mercurial girdles, and by mercurial ointment, upon emperical principles, without regard to circumſtances, time of application, or proper evacuations; and this, as might be expected, has generally brought on aſthma, or palſy, head-ach, epilepſy, or flux, according as the repelled matter chanced to fall. Such of theſe patients as have come under my care, I have found neceſſary to bleed, purge, fumigate and bliſter; beſides making a conſtant drain from the habit, for the ſecurity of the brain and nervous ſyſtem, by one or more iſſues. I do not remember that this method has ever failed of a cure. Diet, exerciſe, &c. was attended to.

For a Gentleman, about fifty, who had anaſarcous ſwellings of his legs, attended with cough, a ſenſe of fulneſs about his cheſt, wheezing, and large diſcharges of phlegmy matter, a loſs of appetite, and who, as he ſaid, could take no medicines, I ventured to order an iſſue below the knee. On finding a good effect from that, I ordered, ſoon after, another in the other leg, and ſent him a few times to the fumigating-bath. With the aſſiſtance of a cupful of the ſimple infuſion of white horehound, and two drams of the tincture of cortex eleutheria in each, which he was prevailed on to take forenoon and afternoon for ſome time, I thus was ſo fortunate as to reſtore him to a much better ſtate of health than he had enjoyed for many years before.

Thus, without quoting the authorities of many other very eminent Phycians and Surgeons, I preſume I have ſufficiently united the teſtimonies of the ancients and moderns, with the experience of my own practice, to eſtabliſhed the neceſſity of a much more general uſe of iſſues than has hitherto obtained.

CHAP. XIV.

On Evacuation by Sternutatories and Errhines.

THESE incentives to ſneezing differ only in their degree of ſtrength and power of action. They are intended to purge off the redundant ſtagnated lymph from the anterior part of the head: but, by the convulſive motion and quicker diſtribution of the fluids, which they occaſion, they have a general effect upon the ſyſtem.

When errhines, ſuch as thoſe of the cephalic herbs, or tobacco, are inſufficient, and a more violent ſhock is neceſſary to be given to the ſyſtem than theſe can produce, the acrid ſternutatories, ſuch as hellebore, elaterium, euphorbium, turbith mineral, or ſternutatory powder of the diſpenſatories are uſed.

Sternutatories, by promoting expectoration, and ſometimes a ptyaliſm, are ſerviceable in humoral aſthma, and other pectoral complaints. By inciting excretions from the brain,

brain, they are beneficial in comatous, paralytic and apoplectic affections: and also in those cases where the nerves are remiss or defective; for they facilitate the secretion of the animal spirits. It however must be observed, that the abuse or, which is exactly the same thing, the too frequent use of strong sternutatories, destroy the nervous power, and thereby bring on the most dismal symptoms: such as head-ach, stupor, deafness, blindness, weakness of memory, convulsions, hœmorrhages and involuntary excretions. Sternutation or sneezing relieves singultus or hiccup, by exciting a contrary motion. It promotes the birth, by contracting the diaphragm and muscles of the lower belly; but it is unsafe in inflamed eyes, fractured ribs, rupture, recent congestions, &c.

Some Physicians, on the idea that sneezing is a favourable symptom, have endeavoured by sternutatories to rouse the faculties of their expiring patients. In some diseases, sneezing is also an indication of death.

Tobacco-snuff is the errhine in most continual use; but the powder of the common cephalic herbs is better adapted for some morbid

morbid affections of the head, as they convey vigour and energy to the animal functions. The naſty faſhioanble uſe of tobacco-ſnuff in Europe, inſtead of ſtimulating a diſcharge of the mucid ſtagnating lymph, becomes familiar to the glandular pituitary membrane, clogs the frontal ſinuſes and lachrymal ducts, obtunds nervous ſenſation, ſtupifies the brain, relaxes and weakens the organs of ſight, deadens the luſtre of the eyes, ſallows the complexion, and has brought on conſumption.

Volatile ſalts and ſpirits are ſternutatories, for they ſtimulate the olfactory nerves to convulſive motions. The volatilia fœtida and the volatilia fragrantia are very different in their effects on the ſyſtem. The fœtida, by being diſguſtful, depreſs; and are applied to the organs of ſmelling, to reſtrain the impetuoſity and turbulent motion of the ſpirits in the brain or nerves; ſuch as in hyſteric convulſive affections. The fragrantia or ſweet-ſmelling parts of aromatics, though their ſtimulus be exquiſitely pleaſant and more mild, are not leſs efficacious; for they expand and render more lively and vigorous, the motion of the languid ſpirits.

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The heart is fortified, the blood invigorated, and the pulse raised; while an increased quantity of more active spirits are conveyed to the brain, and the secretions are rendered more open and free. Either the fœtida or fragrantia, when taken in substance, have a more durable effect.

CHAP.

CHAP. XV.

On Evacuation by Sialogogues and Maſticatories.

THOUGH either of theſe medicines promote a glandular diſcharge by the mouth, they differ in their nature, degree of action and effect on the ſyſtem.—Maſticatories are vegetable, and are partial in their effect: Sialogogues are foſſil, and are univerſal in their effect. But, as we have already noticed the powers of the principle ſialogogue, mercury; we therefore ſhall paſs on to maſticatories: ſuch as pyrethrum, horſe-radiſh, ſtaphyſagria, &c. which, by their pungent ſtimulating quality, evacuate the oral glands, and thereby become ſerviceable in phlegmatic quinzy, tooth-ach, ſwelling of the gums, rheumatiſm in the head, lethargy, palſy of the tongue, and obſtructions of the parts which are ſubſervient to deglutition. "Remember, ſays Bacon, maſticatories for the mouth." Indeed, though nobody can ſuppoſe

ſuppoſe that the great and permanent cure is to be effected by a mere local ſtimulus, yet the maſticatory is nevertheleſs entitled to a place among preſervatives from foul and contagious air, as it prevents the ſaliva, that is tainted by inſpiration, from paſſing into the habit by deglutition.

Exanthematous or puſtulary fevers, are ſeldom mortal to thoſe in whom a ptyaliſm hath taken place. Theſe fevers rarely terminate by ſweat, but by ſaliva :—a catarrh, by diarrhœa.

Tobacco is a maſticatory. But it is particularly to be obſerved, that the united power of medicine and diet cannot ſupply a waſte or defect of that fine digeſtive fluid ſaliva. Great ſpitters are never great eaters. Dr. Bryan Robinſon favoured the Public with an ingenious treatiſe on the great ſalutary power of morning faſting-ſpittle.

The common abſurd habits of trifling with this powerful exotic, occaſions the abuſe of it to be ſo remarkably pernicious. That which nauſeates, may ſuppreſs hunger, but cannot feed. The apathy that is conſequent to the internal uſe of tobacco, evidently ſhows that the

the common uſe of it is not natural. By deſcending into the primæ viæ, it perverts the alimental juices, affects the nervous ſyſtem, and brings on, with tremor and paleneſs, ſickneſs, confuſion, vertigo, loſs of memory and ſtupefaction.

The active principles of tobacco are a ſulphur and a penetrating cauſtic volatile ſalt. By diſtillation, it yields an acid phlegm, ſome urinous ſpirit, and much fœtid oil. Tobacco diſcovers its prevailing acid by making the ſolution of tournſel red. All the preparations of it are *emetic*.—It is a very active medicine, whether uſed internally or externally. As an external, it is detergent, reſolvent, antiſeptic, vulnerary, and antipeſtilential. It deſtroys cutaneous vermin, but with them the hair. By dropping two drops of the eſſential oil of tobacco on the tongue of a cat, ſhe was thrown into convulſions and killed: ſimilar effects were produced by dropping a few drops of the oil into the vein of another cat, and ſuffering it to mix with the circulating blood. A ſingle drop of the oil of tobacco has cured the tooth-ach*.

* *James's Medicinal Dictionary.*

The common error of ſmoking tobacco to exceſs, muſt be very prejudicial; for it increaſes thirſt by exhauſting the native moiſture, and that eſpecially of the brain*. The ſmoke of our own cephalic herbs, in many caſes, is preferable to tobacco: the ſcent is, at leaſt, more grateful to ſome, and leſs offenſive to all. But the ſmoke of tobacco is, by far, the moſt effectual for relieving the cold humid and full phlegmatic habit; for unloading the head and fauces; for reſolving catarrh, and for promoting expectoration; which ſhows it poſſeſſes great ſalutary, as well as deletery powers; and confirms the neceſſity of theſe remarks, to prevent the indiſcriminate abſurd practice that prevails of ſo much abuſing it, as rather to humour faſhion than to ſatisfy reaſon.... An obſervation that may be applied alſo to the too common mode of injudiciouſly trifling with medicine in general, or not adverting to the adage *Quid natura faciat aut ferat.*—I never met with two patients whom I could invariably treat alike.

* Vide Borrhi's Letter to Bartholine.

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On the whole, I flatter myſelf, with the hope of having ſo far ſatisfied the *Judgment* of the *Intelligent Reader*, that, for the preſent, I may be permitted to take leave of him in the words of that illuſtrious Roman, Celſus: "Sed purgationes quoque ut interdum neceſſariæ ſunt, ſic ubi frequentes ſunt, periculum afferunt."

THE END.